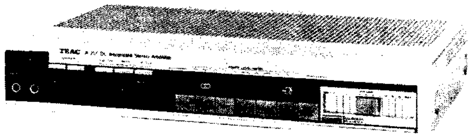
TEAC®



SERVICE MANUAL

A-717/A-515/A-313

DC Integrated Stereo Amplifier

5704018600

1 SPECIFICATIONS

A-717

Type DC Integrated Stereo Amplifier
Rated Output Power
(Both Channels, 8 ohms)
55 W + 55W (1 kHz, 0.1% T.H.D.)
50 W + 50W (30 Hz ~ 20 kHz, 0.05% T.H.D.)
Total Harmonic Distotion
0.05% (30 Hz ~ 20 kHz, at 50 W + 50 W Output Power)
Output Bandwidth
IHF, -3 dB, 10 Hz ~ 50 kHz
Frequency Response
TUNER, CD/AUX, TAPE 1, 2 to SP out
10 Hz ~ 55 kHz + 0, -2 dB
PHONO to REC OUT, 20 Hz ~ 20 kHz ±0.5 dB (RIAA)
Input Sensitivity
PHONO MC 220 μV/100 ohms
PHONO MM 2.5 mV/47 k ohms
TUNER, CD/AUX, TAPE 1, 2 150 mV/47 k ohms
MIC 0.775 mV/4.7 k ohms
Rated Output Voltage/Impedance
TAPE REC 1, 2 150 mV/47 k ohms
Signal-to-Noise Ratio
(IHF A Network, Short Circuit)
PHONO MC 66 dB
PHONO MM 86 dB
TUNER, CD/AUX, TAPE 1, 2 96 dB
Tone Control
Bass ± 10 dB, 100 Hz
Treble ± 10 dB, 10 kHz
Subsonic Filter
15 Hz, 6 dB/oct
Muting 20 dB
Power Requirements
100/120/220/240 V AC 50/60 Hz, 98 W
(General Export Model)
220 V AC 50 Hz, 260 W (Europe Model)
240 V AC 50 Hz, 350 W (U.K./Aus. Model)
Dimensions (W x H x D)
432 x 72 x 298 mm (17" x 2-13/16" x 11-3/4")
Weight 5.5 kg (12-2/16 lbs) net

- Improvements may result in specification or feature changes without notice.
- Photos may differ slightly from production models.

NOTES

1. **In this manual, 0 dB is referenced to 1 V.**
2. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components – refer to the appropriate parts list and ensure exact replacements.
3. PC boards shown are viewed from foil side.

A-515/A-313

Type DC Integrated Stereo Amplifier
Rated Output Power (Both channels, 8 ohms)
A-515 38 W + 38 W (EIAJ*)
A-313 25 W + 25 W (EIAJ)
A-515 35 W + 35 W (1 kHz, 0.12% T.H.D.)
A-313 22 W + 22 W (1 kHz, 0.16% T.H.D.)
A-515 30 W + 30 W (30 Hz – 20 kHz 0.06% T.H.D.)
A-313 20 W + 20 W (40 Hz – 20 kHz 0.08% T.H.D.)
Total Harmonic Distortion
A-515 0.06%
(30 Hz – 20 kHz at 30 W + 30 W Output Power)
A-313 0.08%
(40 Hz – 20 kHz at 20 W + 20 W Output Power)
Output Bandwidth IHF, -3 dB, 10 Hz – 50 kHz
Frequency Response
TUNER, CD/AUX, TAPE to SP out
10 Hz – 55 kHz +0, -2 dB
PHONO to REC OUT, 20 Hz – 20 kHz ±0.5 dB (RIAA)
Input Sensitivity
PHONO MM 2.5 mV/47 k ohm
TUNER, CD/AUX, TAPE 150 mV/47 k ohms
Rated Output Voltage/Impedance
TARE REC 150 mV/47 k ohms
Signal-to-Noise Ratio (IHF A Network, Short Circuit)
PHONO MM 72 dB
TUNER, CD/AUX, TAPE 96 dB
Tone Control
Bass ± 10 dB, 100 Hz
Treble ± 10 dB, 10 kHz
Power Requirements
100/120/220/240 V AC 50/60 Hz, 60 W (45 W, A-313)
(General Export Model)
220 V AC 50 Hz, 160 W (120 W, A-313) (Europe Model)
240 V AC 50 Hz, 210 W (150 W, A-313) (U.K./Aus. Model)
Dimensions (W x H x D)
432 x 72 x 298 mm (17" x 2-13/16" x 11-3/4")
Weight A-515 4.5 kg (9-15/16 lbs) net
A-313 4.0 kg (8-13/16 lbs) net

* EIAJ: Electronic Industries Association of Japan.

2 ADJUSTMENTS

A-717 only

2-1 INITIAL SETTINGS

Without applying AC power, set the controls as shown below.

Control	Position or Setting
SPEAKERS	A
SUBSONIC	OUT
MODE	ST
MUTING	OUT
MIC MIXING	0
BASS	0
TREBLE	0
BALANCE	0
TAPE COPY	OUT

Control	Position or Setting
TAPE 1	OUT
TAPE 2	OUT
TUNER	OUT
CD/AUX	IN
PHONO MM	OUT
PHONO MC	OUT
LOUDNESS	OUT
VOLUME	MIN

2-2 ADJUSTMENTS LOCATION

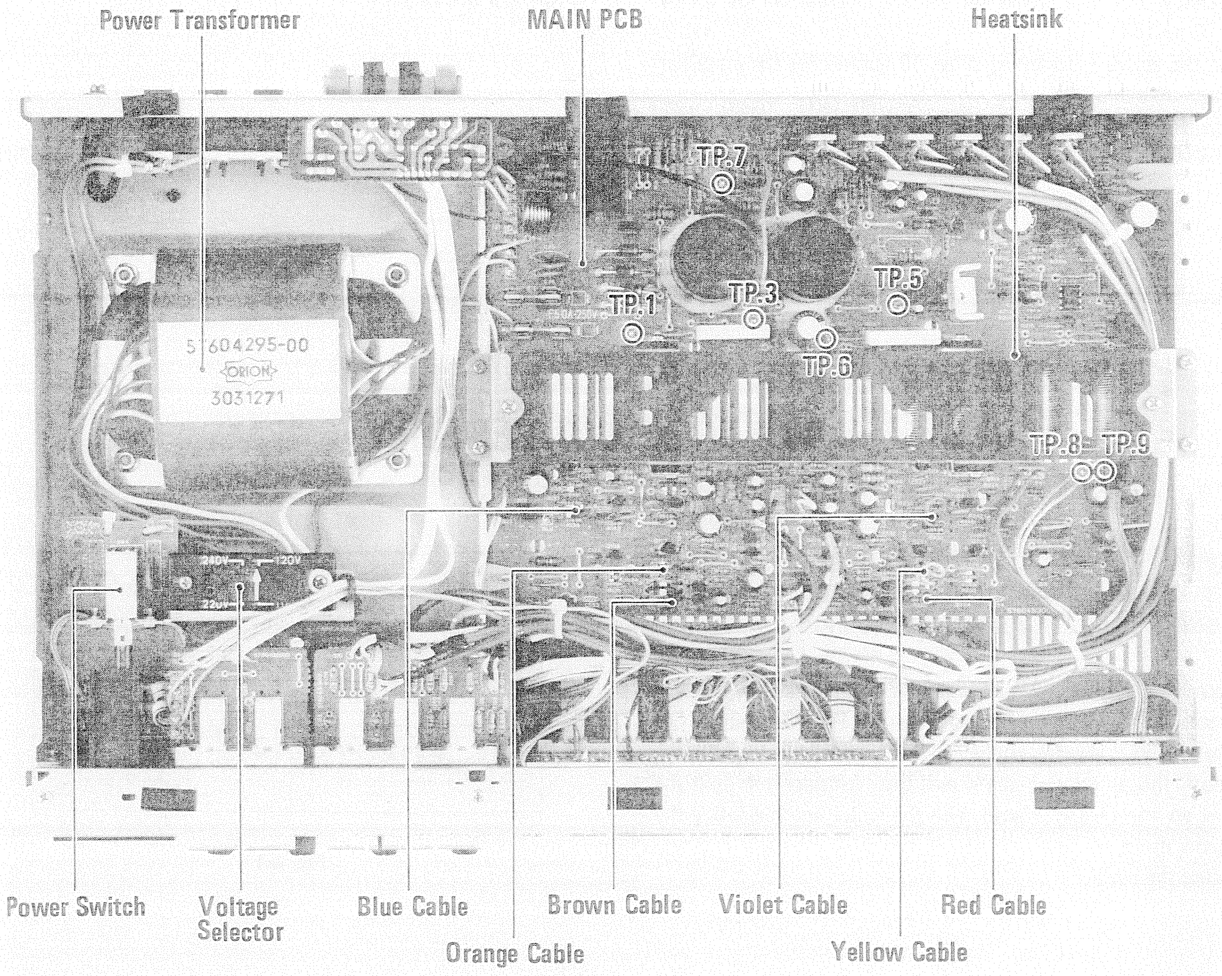

Power Transformer
MAIN PCB
Heatsink
TP.7
TP.1
TP.3
TP.5
TP.6
TP.8
TP.9
5 604295-00
ORION
3031271
240V
120V
220V
Power Switch
Voltage Selector
Blue Cable
Orange Cable
Brown Cable
Violet Cable
Yellow Cable
Red Cable

Fig. 2-1

2-3 DC BALANCE CHECK

1. Connect the DC voltmeter to SPEAKERS A terminal.
2. Depress POWER switch to ON.
3. Confirm the DC voltmeter indication within 0 V ±50 mV.
4. If the DC voltmeter indicates over +50 mV, cut the orange cable between 3 and 3 terminals (for L-ch) or the yellow cable between 4 and 4 terminals (for R-ch) on the MAIN PCB.
5. If the DC voltmeter indicates less than -50 mV, cut the brown cable between 1 and 1 terminals (for L-ch) or the red cable between 2 and 2 terminals (for R-ch) on the MAIN PCB.

2-4 IDLING CURRENT CHECK

1. Connect the DC voltmeter between TP-3 (L-ch)/TP-5 (R-ch) and TP-1 (L-ch)/TP-6 (R-ch).
2. Confirm the DC voltmeter indication within 5 mV when POWER is ON after 10 seconds.
3. If the DC voltmeter indicates over 5 mV cut the blue cable between 6 and 6 terminals for LEFT channel or the violet cable between 7 and 7 terminals for RIGHT channel on the MAIN PCB.
4. After the above procedures, allow 10 minites for the amplifier to warm up completely.
5. Confirm the DC voltmeter indication which should be within 2 to 25 mV.

2-5 REALY OPERATION CHECK

1. Apply 1 kHz/150 mV (-16.5 dB) to the AUX terminal.
2. Adjust the VOLUME control so that output voltage is 1 V at the SPEAKER terminal.
3. Apply a +2.5 V or -2.5 V DC to the TP-7 to couse the realy RY1 to break immediately.
4. Remove the DC signal from the TP-7.
5. Adjust the VOLUME control so that output voltage is 0.5 V at the SPEAKER terminal.
6. Shortcircuit the SPEAKER terminal between + and - so that the relay RY1 break immediately.

2-6 PHONO CIRCUIT DC VOLTAGE CHECK

1. Connect the DC voltmeter between TP.7 and GND terminals.
2. Confirm the DC voltmeter indication which should be within +14.5 mV to +16.7 mV.
3. Connect the DC voltmeter between TP.8 and GND terminals.
4. Confirm the DC voltmeter indication which should be within -14.5 mV to -16.7 mV.

3 VOLTAGE CONVERSION

(FOR GENERAL EXPORT MODELS)

BE SURE TO REMOVE THE POWER CORD FROM THE AC OUTLET BEFORE REMOVING THE METAL COVER AND REPOSITIONING THE VOLTAGE CONVERSION PLUG.

1. Remove the metal housing covering the top and sides of the unit by removing the screws from each side of the metal cover.
2. Locate the voltage selector plug on the left side of the unit.
3. Remove the plug by pulling it out, then re-insert it so that the arrow on the plug is aligned with the white line indicating the proper voltage.
4. Replace the cover.

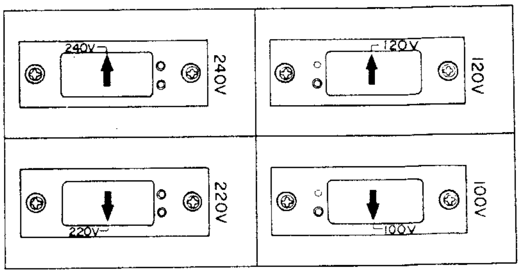


Fig. 3-1

4 BLOCK DIAGRAM

A-717

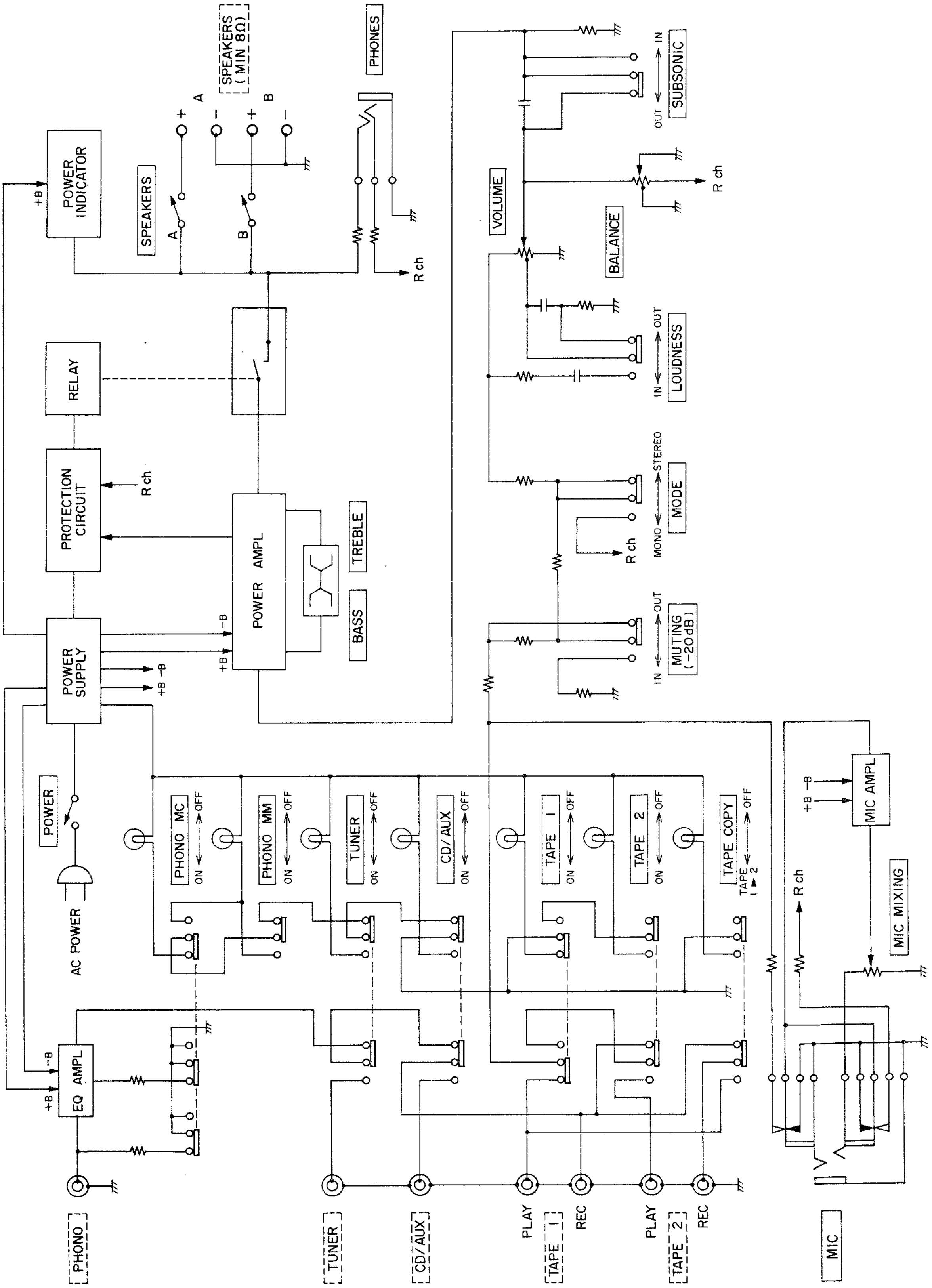

POWER INDICATOR
+B
SPEAKERS
A
B
SPEAKERS (MIN 8Ω)
+
−
PHONES
R ch
RELAY
PROTECTION CIRCUIT
POWER AMPL
TREBLE
BASS
+B
−B
POWER SUPPLY
POWER
AC POWER
EQ AMPL
PHONO MC
PHONO MM
TUNER
CD/AUX
TAPE 1
TAPE 2
TAPE COPY
TAPE 1►2
ON
OFF
VOLUME
BALANCE
SUBSONIC
LOUDNESS
IN
OUT
MODE
MONO
STEREO
MUTING (−20dB)
MIC AMPL
MIC MIXING
PHONO
TUNER
CD/AUX
PLAY
REC
TAPE 1
PLAY
REC
TAPE 2
MIC

Fig. 4-1

A-515

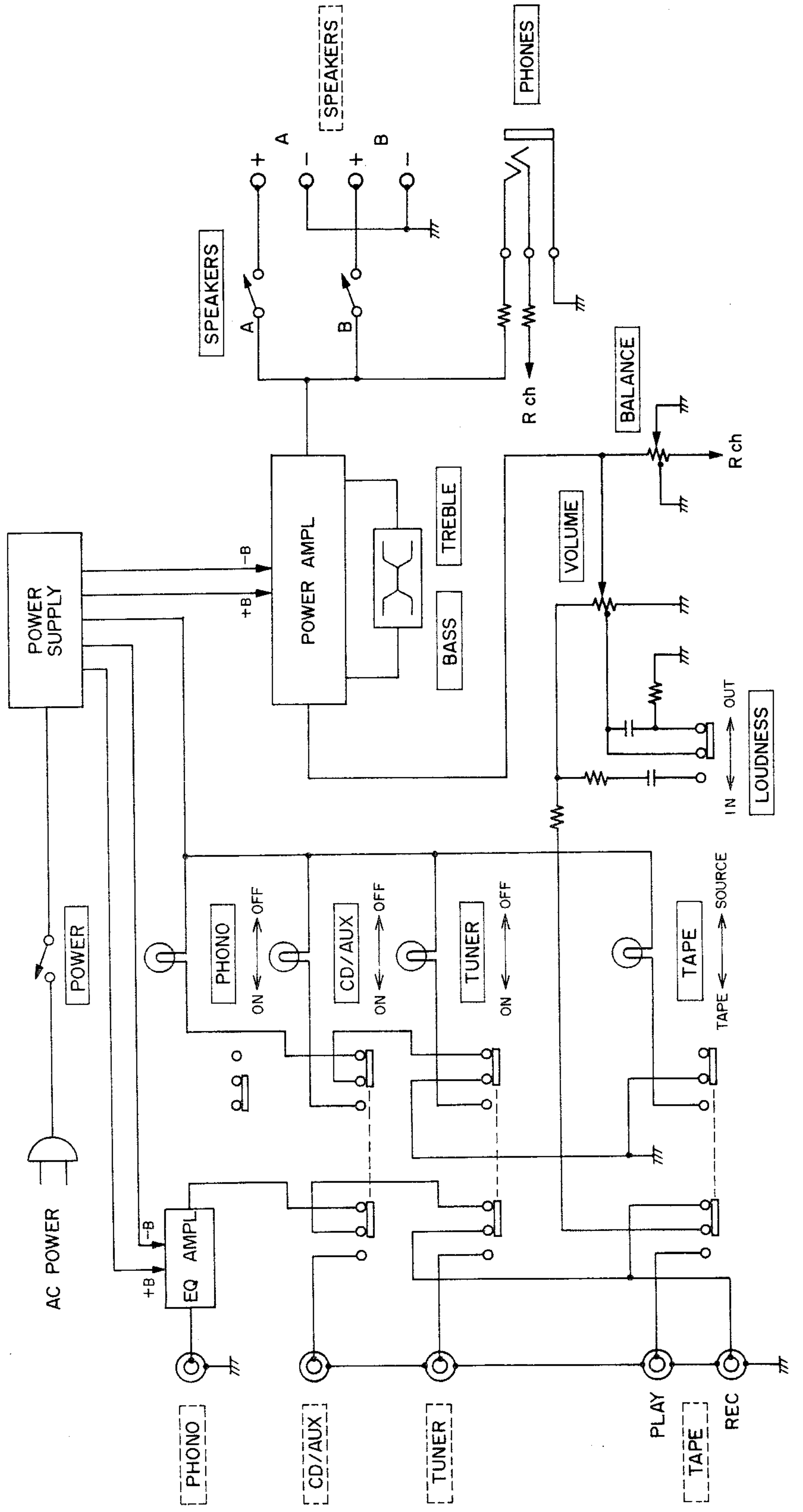

SPEAKERS
A
B
+
–
SPEAKERS
A
B
PHONES
R ch
BALANCE
R ch
VOLUME
TREBLE
BASS
POWER AMPL
POWER SUPPLY
–B
+B
LOUDNESS
IN
OUT
PHONO
ON
OFF
CD/AUX
ON
OFF
TUNER
ON
OFF
TAPE
TAPE
SOURCE
POWER
AC POWER
EQ AMPL
+B
–B
PHONO
CD/AUX
TUNER
PLAY
TAPE
REC

Fig. 4-2

A-313

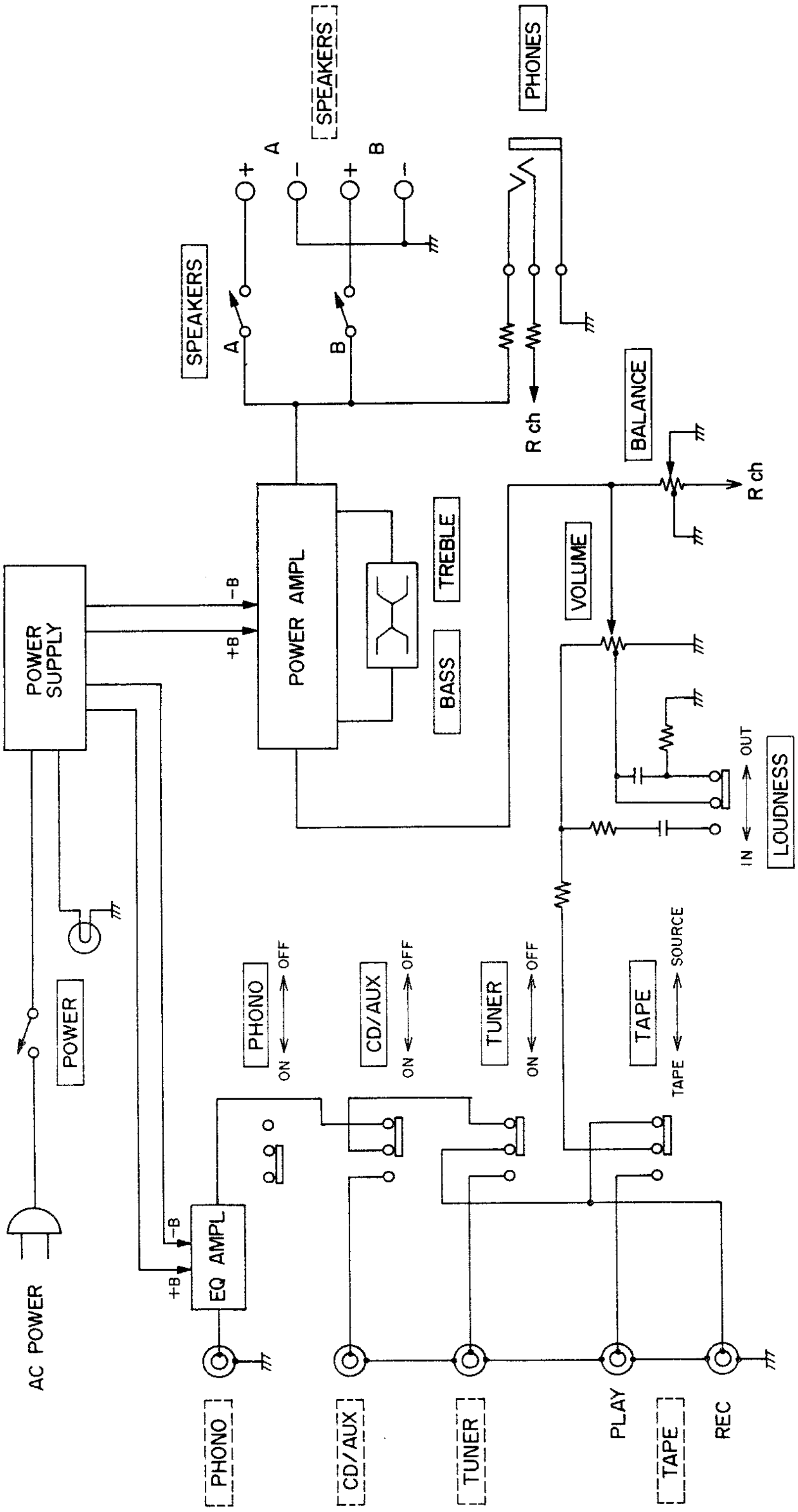
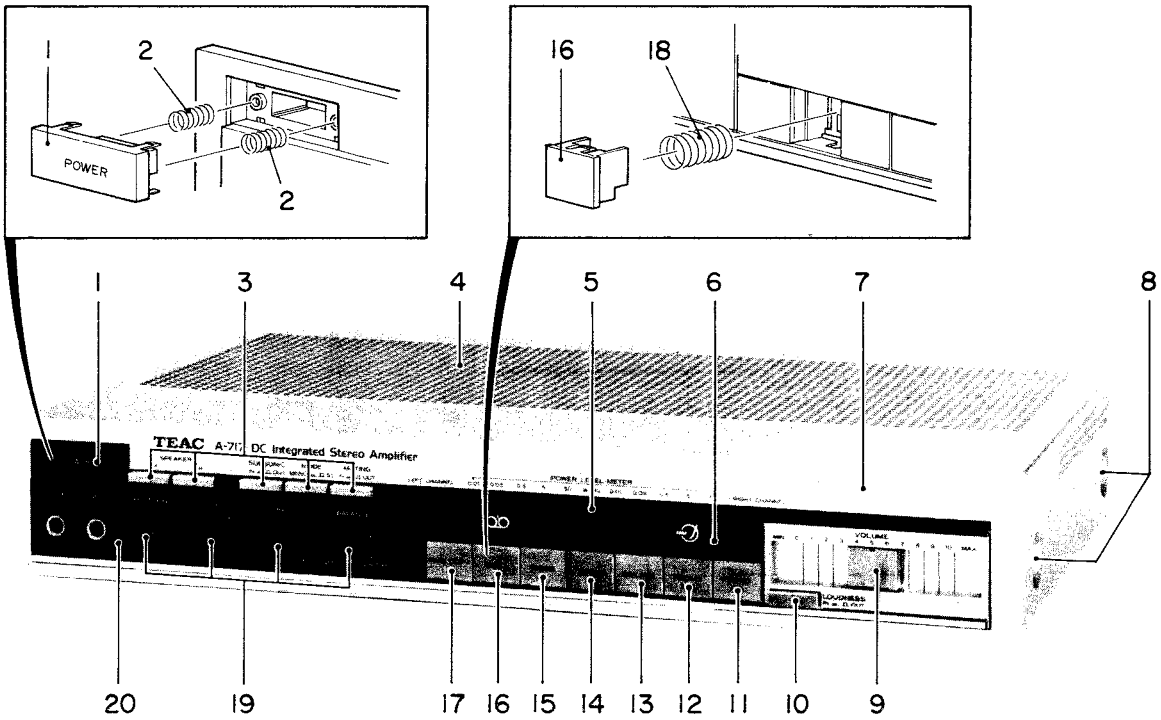

SPEAKERS
PHONES
A
B
+
−
SPEAKERS
R ch
BALANCE
R ch
POWER SUPPLY
−B
+B
POWER AMPL
TREBLE
BASS
VOLUME
OUT
LOUDNESS
IN
POWER
PHONO
ON
OFF
CD/AUX
ON
OFF
TUNER
ON
OFF
TAPE
TAPE
SOURCE
AC POWER
−B
+B
EQ AMPL
PHONO
CD/AUX
TUNER
PLAY
TAPE
REC

Fig. 4-3

5 PARTS LOCATION AND PARTS LIST

A-717

PARTS LOCATION-1


1
2
2
POWER
16
18
1
3
4
5
6
7
8
TEAC A-717 DC Integrated Stereo Amplifier
POWER LEVEL METER
VOLUME
LOUDNESS
20
19
17
16
15
14
13
12
11
10
9

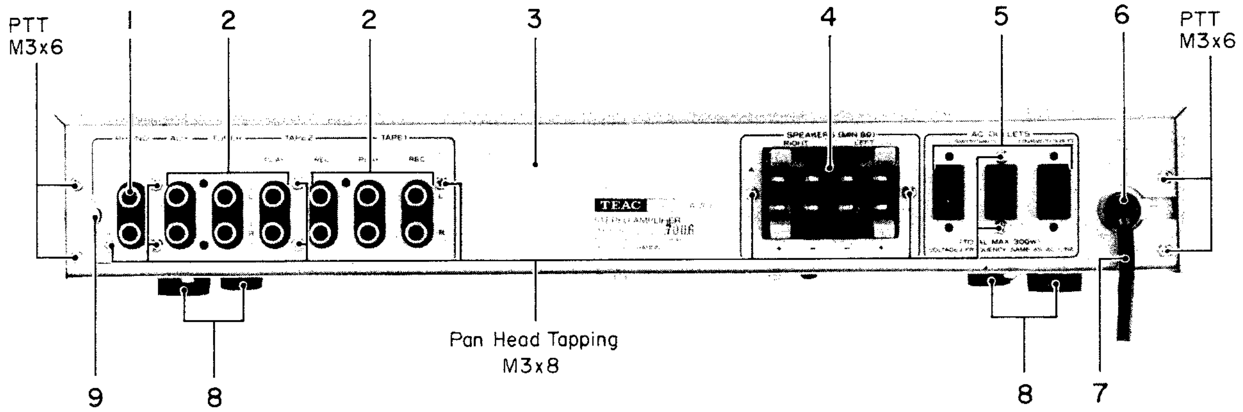
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	5760429000	Button, Power	
1 - 2	5760425900	Spring, A	
1 - 3	5800379100	Button, Push; A	
1 - 4	*5760108100	Cover, Top	
1 - 5	*5760422400	Plate, Meter; Acrylic	
1 - 6	*5760422300	Plate, Display; Acrylic	
1 - 7	*5760421800	Panel, Front	
1 - 8	*5783114008	Screw, M4 x 8 (BLK Ni)	
1 - 9	5760422600	Knob, Slide	
1 - 10	5760423200	Button, G; LOUDNESS	
1 - 11	5760422700	Button, PHONO MC	
1 - 12	5760422800	Button, PHONO MM	
1 - 13	5760421300	Button, CD/AUX	
1 - 14	5760421200	Button, TUNER	
1 - 15	5760423000	Button, TAPE 2	
1 - 16	5760422900	Button, TAPE 1	
1 - 17	5760423100	Button, TAPE COPY	
1 - 18	5760422200	Spring, B	
1 - 19	5760422500	Knob, VR	
1 - 20	*5760421700	Escutcheon, Panel	

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*5700046800	A-717 Owner's Manual	

Parts marked with * require longer delivery time.

PARTS LOCATION-2

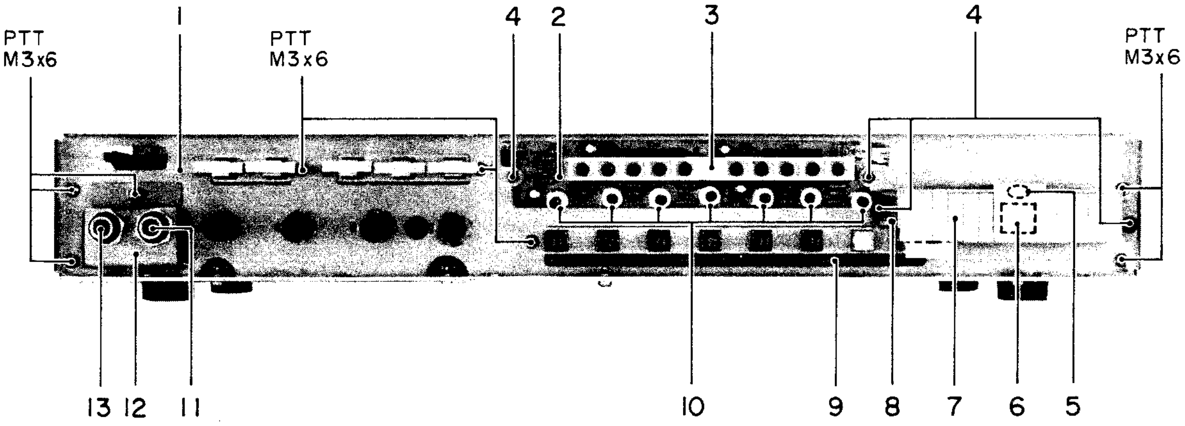


REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	*5760142100	Jack, Pin; 2P	J1
2 - 2	*5330505200	Jack, Pin; 6P	J2, J3
2 - 3	*5760428700	Panel, Rear; Q [GE]	
	*5760428800	Panel, Rear; R [E, UK, A]	
2 - 4	*5760102700	Terminal, Speakers	
2 - 5	⚠*5760337300	Socket, AC Outlet [GE]	J7
2 - 6	⚠*5800136400	Grommet, Cord; 4P-4 [GE]	
	⚠*5800136500	Grommet, Cord; 4K-4 [E, UK, A]	
2 - 7	⚠ 5760098100	Cord, AC Power [GE]	
	⚠ 5760098200	Cord, AC Power [E]	
	⚠ 5760098300	Cord, AC Power [UK]	
	⚠ 5760098400	Cord, AC Power [A]	
2 - 8	5760241100	Foot	
2 - 9	*5760081300	Nut, GND Terminal (Ni)	
		Screw, P M3 x 12 (Ni)	
		Nut, M3 (Ni)	
		Washer, Lock; LWE $\phi 3$	

Parts marked with * require longer delivery time.

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

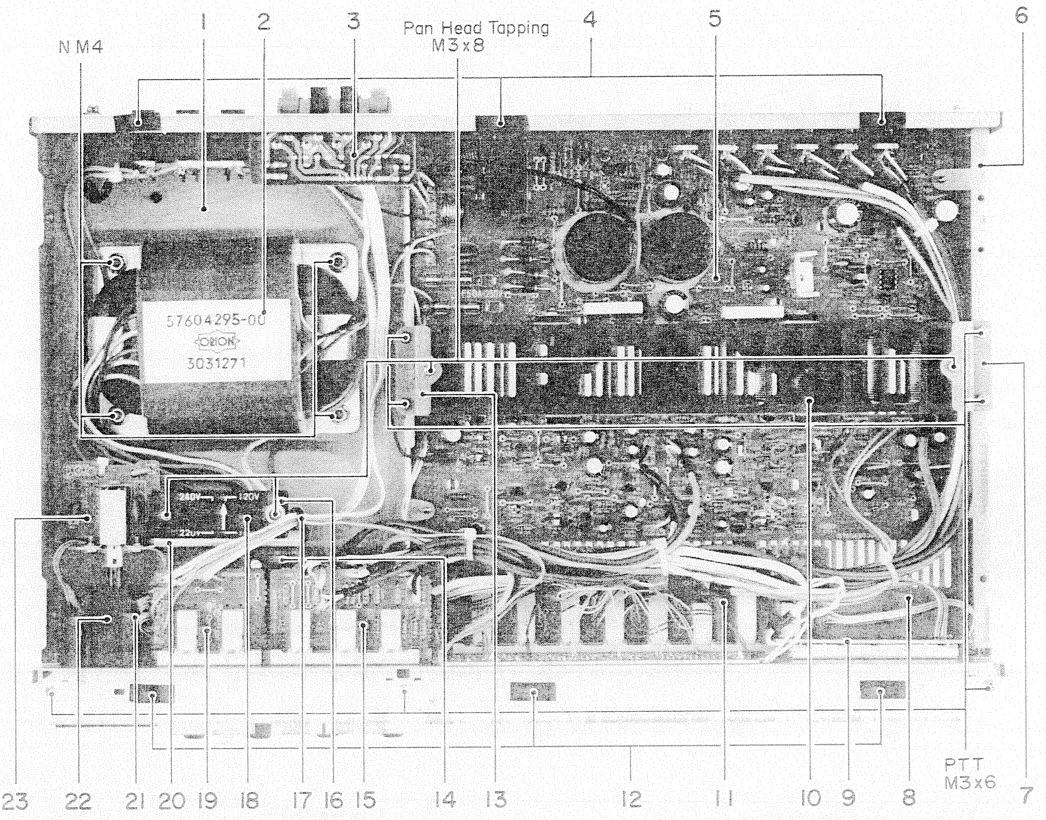
PARTS LOCATION-3



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3 - 1	*5760421900	Chassis, Front	
3 - 2	*5760484300	PCB Assy, LED	
3 - 3	*5760426300	Hood, LED; D	
3 - 4	*5534878000	Rivet, Push	
3 - 5	*5760482700	Tube, Rubber	
3 - 6	*5760482600	Spacer, Felt	
3 - 7	*5760422100	Plate, VR Scale	
3 - 8	*5760422000	Guide, VR	
3 - 9	*5760483600	PCB Assy, SELECTOR SW	
3 - 10	*5760430400	Holder, Lamp	
3 - 11	5760485000	Jack, MIC	J4
3 - 12	*5760243900	Bracket, Jack; D	
3 - 13	5760485100	Jack, PHONES	J5

Parts marked with * require longer delivery time.

PARTS LOCATION-4



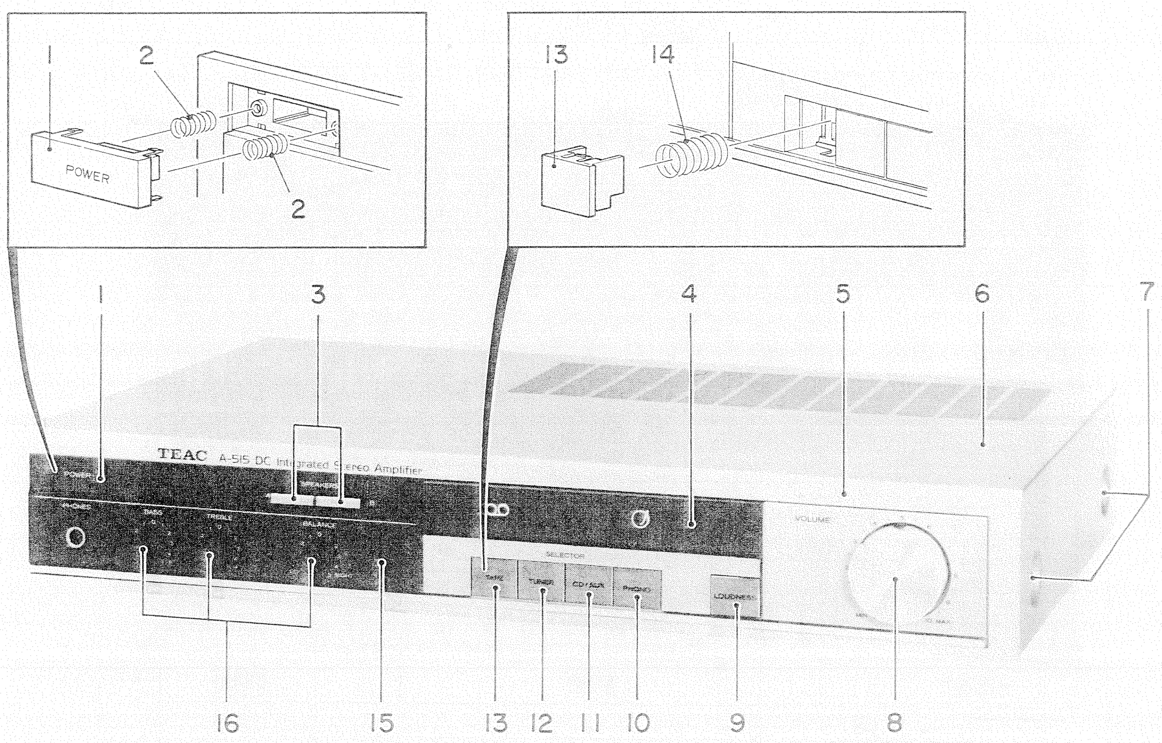
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 1	*5760430500	Chassis, Transformer; B	
4 - 2	⚠ 5760429500	Transformer, Power [GE]	
	⚠ 5760429600	Transformer, Power [E, UK, A]	
4 - 3	*5760483900	PCB Assy, SPEAKER TERMINAL [E]	
	*5760483910	PCB Assy, SPEAKER TERMINAL [GE, UK, A]	
4 - 4	*5760095600	Cushion, B	
4 - 5	*5760483500	PCB Assy, MAIN [E]	
	*5760483510	PCB Assy, MAIN [GE, UK, A]	
4 - 6	*5760092600	Frame, Side	
4 - 7	*5760108800	Bracket, Heatsink; R	
4 - 8	*5760244100	Cover, Bottom; S	
4 - 9	*5760484200	PCB Assy, VOLUME	
4 - 10	*5760121500	Heatsink, B	
4 - 11	*5760483600	PCB Assy, SELECTOR SW	
4 - 12	*5760095500	Cushion, A	
4 - 13	*5760108700	Bracket, Heatsink; L	
4 - 14	*5760483700	PCB Assy, TONE & MIC	
4 - 15	*5760484000	PCB Assy, MUTING	
4 - 16	⚠*5332011200	Socket, Voltage Selector [GE]	
4 - 17	*5581038000	Clamper, Cord	
4 - 18	⚠*5133014000	Plug, Voltage Selector [GE]	
4 - 19	*5760484100	PCB Assy, SPEAKER SW	
4 - 20	*5760243800	Bracket, Power Switch	
4 - 21	*5760483800	PCB Assy, JACK	
4 - 22	*5760424400	Shaft, Power Switch	
4 - 23	*5760481100	PCB Assy, POWER SW [GE]	
	*5760481110	PCB Assy, POWER SW [E]	
	*5760481120	PCB Assy, POWER SW [UK, A]	

Parts marked with * require longer delivery time.

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

A-515/A-313

PARTS LOCATION-1 (A-515)


1
2
POWER
2
13
14
1
3
4
5
6
7
TEAC A-515 DC Integrated Stereo Amplifier
POWER
PHONES
BASS
TREBLE
BALANCE
SPEAKERS
SELECTOR
TAPE
TUNER
CD/AUX
PHONO
LOUDNESS
VOLUME
16
15
13
12
11
10
9
8

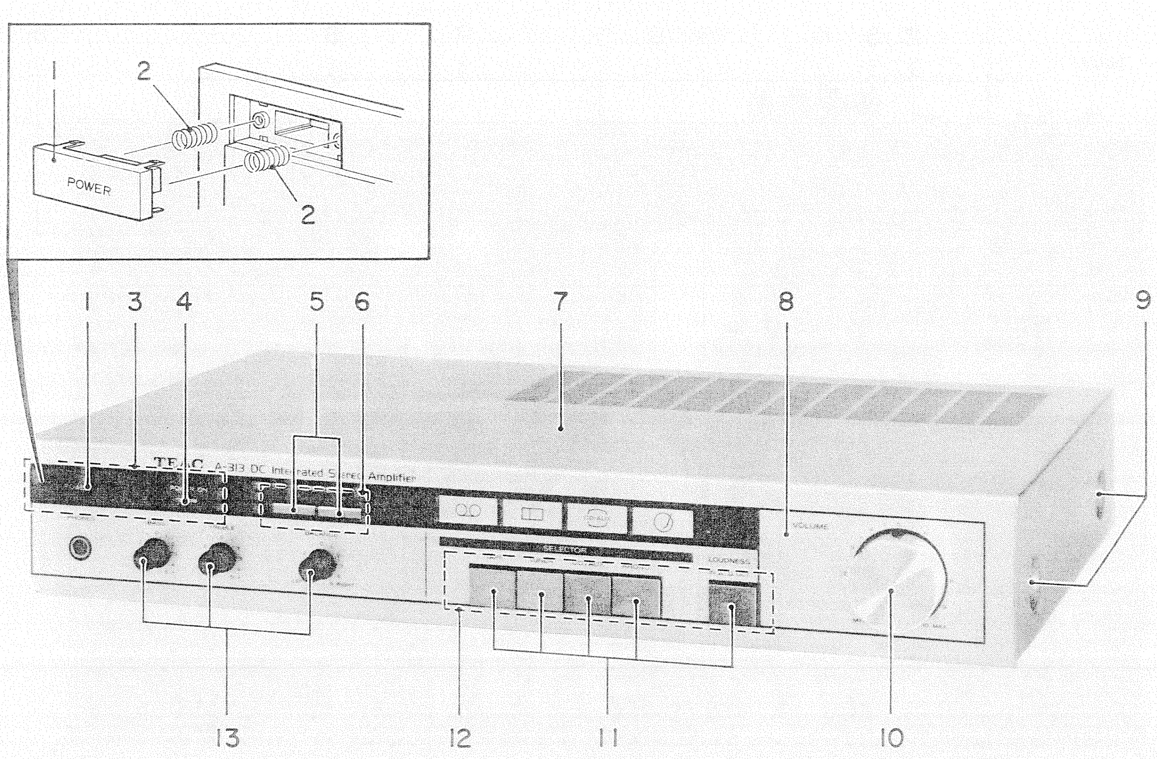
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1 - 1	5760429000	Button, Power	
1 - 2	5760425900	Spring, A	
1 - 3	5800379100	Button, Push; A	
1 - 4	*5760421100	Plate, Display; Acrylic	
1 - 5	*5760420900	Panel, Front	
1 - 6	*5760249000	Cover, Top; B	
1 - 7		Screw, M4 x 8 (BLK Ni)	
1 - 8	5760242200	Knob, VOLUME	
1 - 9	5760421600	Button, LOUDNESS	
1 - 10	5760421500	Button, PHONO	
1 - 11	5760421300	Button, CD/AUX	
1 - 12	5760421200	Button, TUNER	
1 - 13	5760421400	Button, TAPE	
1 - 14	5760422200	Spring, B	
1 - 15	*5760420800	Esucutcheon, Panel	
1 - 16	5760422500	Knob, VR	

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	*5700046600	A-515/A-313 Owner's Manual	

Parts marked with * require longer delivery time.

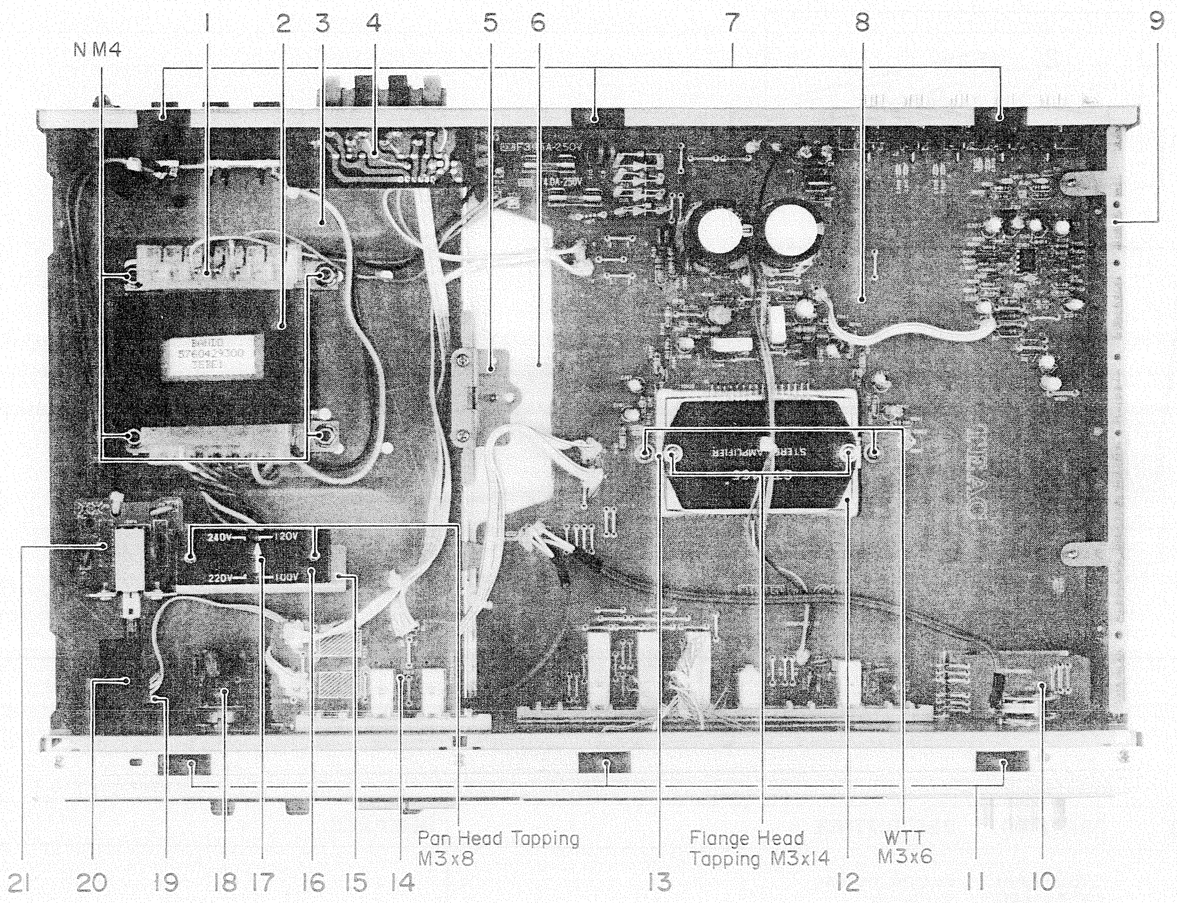
PARTS LOCATION-2 (A-313)


1
2
POWER
2
1
3
4
5
6
7
8
9
TEAC A-313 DC Integrated Stereo Amplifier
SELECTOR
LOUDNESS
VOLUME
13
12
11
10

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2 - 1	5760429000	Button, Power	
2 - 2	5760425900	Spring, A	
2 - 3	*5760420400	Guide, Button; A	
2 - 4	*5760420500	Lens, Lamp	
2 - 5	5760428400	Button, Push; I	
2 - 6	*5760420600	Guide, B	
2 - 7	*5760249000	Cover, Top; B	
2 - 8	*5760420200	Panel, Front	
2 - 9		Screw, M4 x 8 (BLK Ni)	
2 - 10	5760242200	Knob, VOLUME	
2 - 11	5760420700	Button, C	
2 - 12	*5760420300	Guide, C	
2 - 13	5760422500	Knob, VR	

Parts marked with * require longer delivery time.

PARTS LOCATION-3

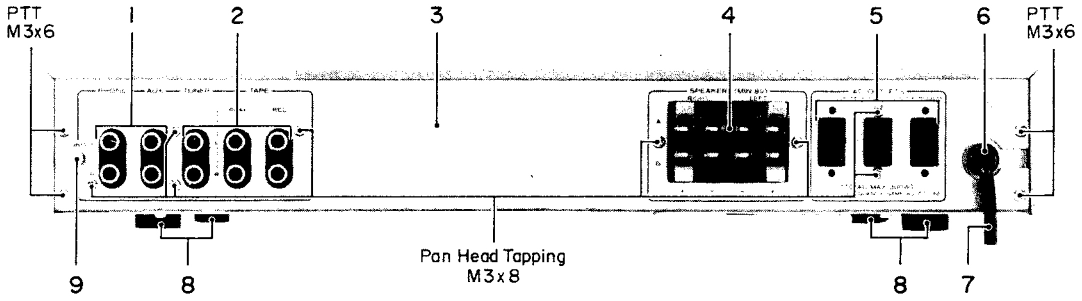

N M4
1
2
3
4
5
6
7
8
9
240V
120V
220V
100V
Pan Head Tapping M3x8
Flange Head Tapping M3x14
WTT M3x6
21
20
19
18
17
16
15
14
13
12
11
10

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3 - 1	⚠ 5760429300	Transformer, Power [GE]	A-515
	⚠ 5760429400	Transformer, Power [E, UK, A]	A-515
	⚠ 5760429100	Transformer, Power [GE]	A-313
	⚠ 5760429200	Transformer, Power [E, UK, A]	A-313
3 - 2	*5760446800	Pad, Transformer; B	A-515
	*5760446700	Pad, Transformer; A	A-313
3 - 3	*5760430500	Chassis, Transformer; B	
3 - 4	*5760481000	PCB Assy, SPEAKER TERMINAL [E]	
	*5760481010	PCB Assy, SPEAKER TERMINAL [GE, UK, A]	
3 - 5	*5760348000	Bracket, Bottom Cover	
3 - 6	*5760244200	Cover, Bottom; A	
3 - 7	*5760095600	Cushion, B	
3 - 8	*5760481900	PCB Assy, MAIN [E]	A-515
	*5760481910	PCB Assy, MAIN [GE, UK, A]	A-515
	*5760480500	PCB Assy, MAIN [E]	A-313
	*5760480510	PCB Assy, MAIN [GE, UK, A]	A-313
3 - 9	*5760092600	Frame, Side	
3 - 10	*5760480800	PCB Assy, VOLUME	
3 - 11	*5760095500	Cushion, A	
3 - 12	*5760255900	Heatsink, IC	
3 - 13	*5760247100	Support, Heatsink	
3 - 14	*5760480700	PCB Assy, SPEAKER SW [E]	
	*5760480710	PCB Assy, SPEAKER SW [GE, UK, A]	
3 - 15	*5760243800	Bracket, Power Switch	
3 - 16	⚠*5332011200	Socket, Voltage Selector [GE]	
3 - 17	⚠*5133014000	Plug, Voltage Selector [GE]	
3 - 18	*5760480600	PCB Assy, TONE	
3 - 19	*5760482000	PCB Assy, HEADPHONE	A-515
	*5760480900	PCB Assy, HEADPHONE	A-313
3 - 20	*5760424400	Shaft, Power Switch	
3 - 21	*5760481100	PCB Assy, POWER SW [GE]	
	*5760481110	PCB Assy, POWER SW [E]	
	*5760481120	PCB Assy, POWER SW [UK, A]	

Parts marked with * require longer delivery time.

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

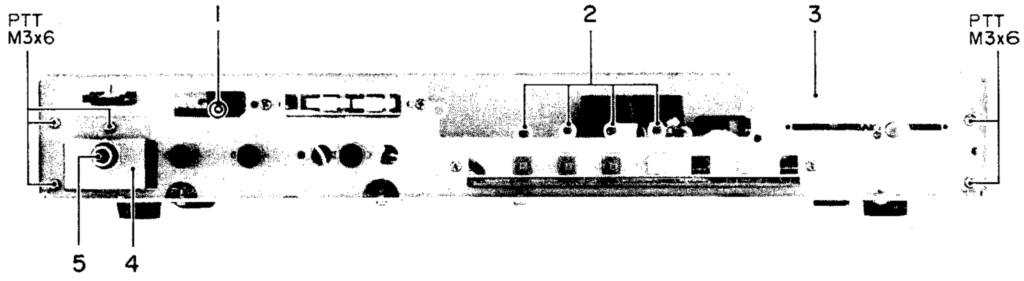
PARTS LOCATION-4



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4 - 1	*5760339000	Jack, Pin; 4P	
4 - 2	*5760338900	Jack, Pin; 6P	
4 - 3	*5760428600	Panel, Rear; P	
4 - 4	*5760102700	Terminal, Speakers; 8P	
4 - 5	⚠*5760337300	Socket, AC Outlet [GE]	
4 - 6	⚠*5800136400	Grommet, Cord; 4P-4 [GE]	
	⚠*5800136500	Grommet, Cord; 4K-4 [E, UK, A]	
4 - 7	⚠ 5760098100	Cord, AC Power [GE]	
	⚠ 5760098200	Cord, AC Power [E]	
	⚠ 5760098300	Cord, AC Power [UK]	
	⚠ 5760098400	Cord, AC Power [A]	
4 - 8	5760241100	Foot	
4 - 9	*5760081300	Nut, GND Terminal (Ni) Screw, P M3 x 12 (Ni) Nut, M3 (Ni) Washer, Lock; LWE ϕ3	

Parts marked with * require longer delivery time.

PARTS LOCATION-5



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5 - 1	*5760430400	Holder, Lamp	A-313
5 - 2	*5760430400	Holder, Lamp	A-515
5 - 3	*5760421900	Chassis, Front	
5 - 4	*5760421000	Bracket, Jack; N	
5 - 5	5760485100	Jack, PHONES	A-515
	5760481700	Jack, PHONES	A-313

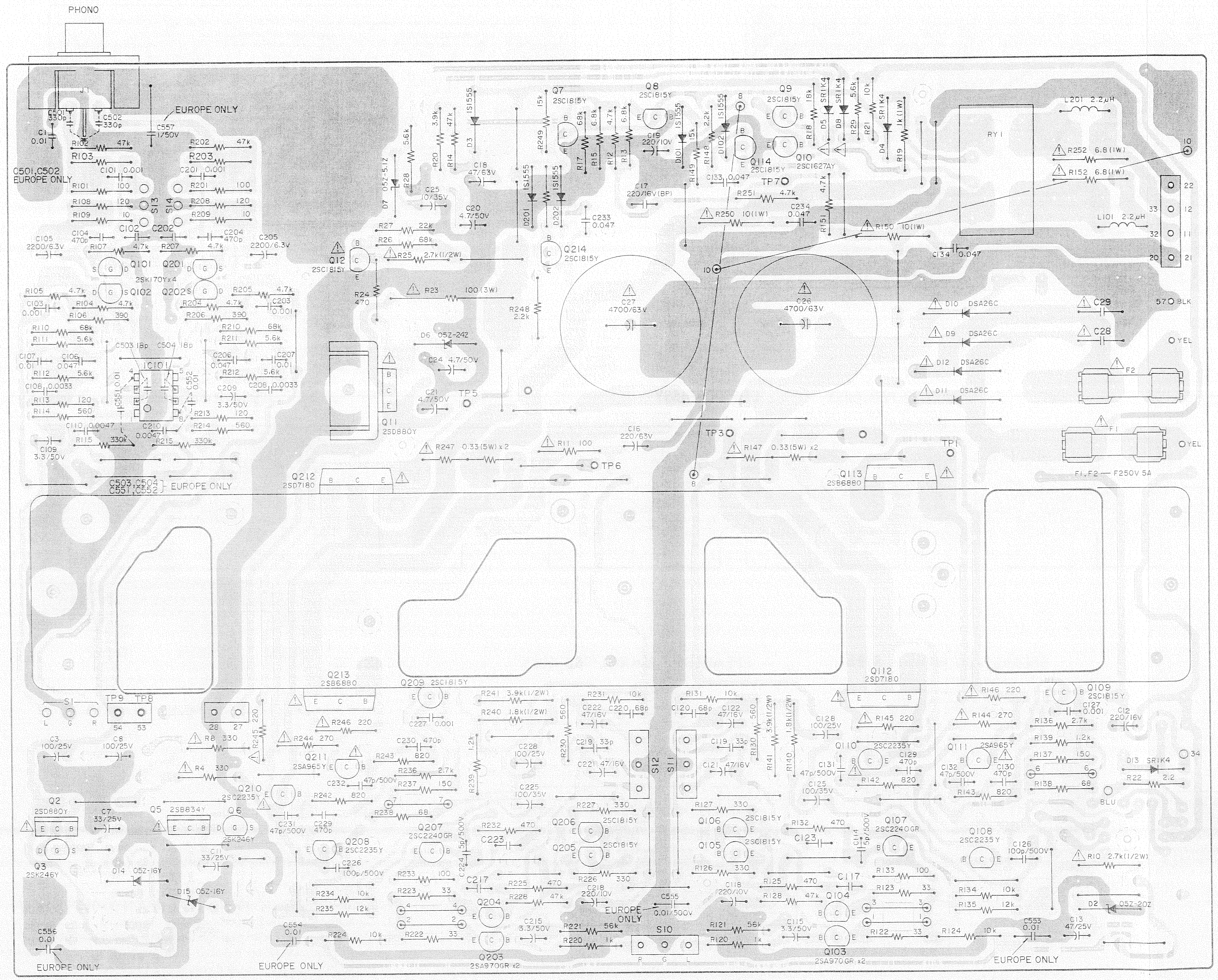
Parts marked with * require longer delivery time.

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

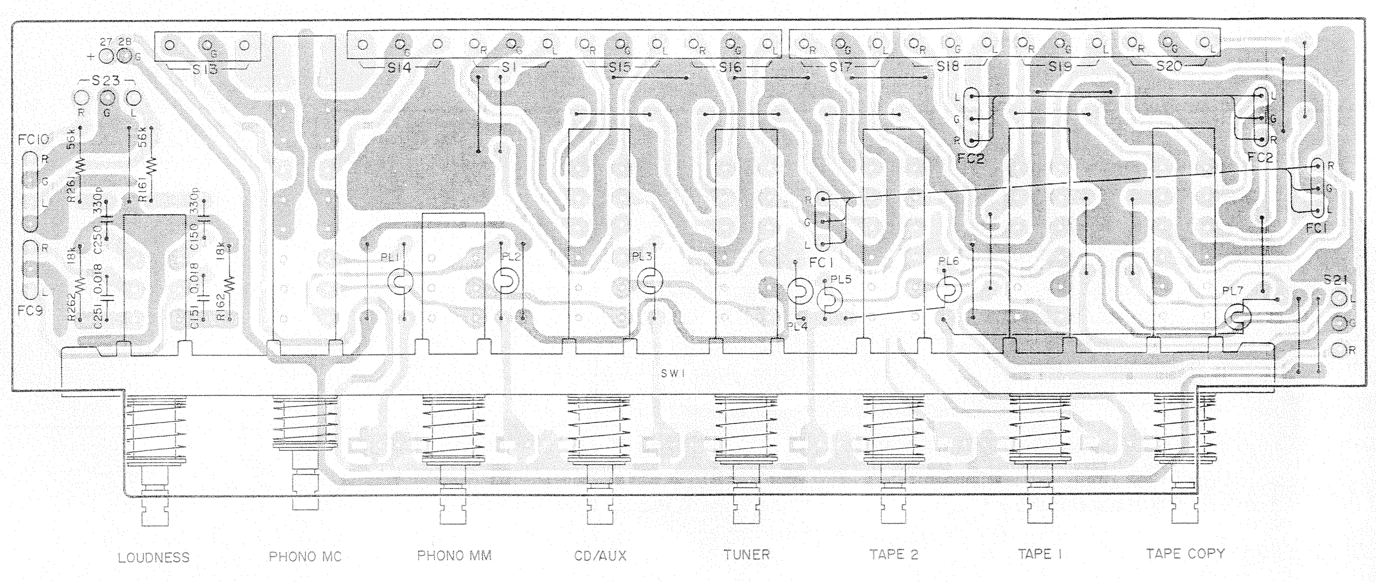
6 PC BOARDS AND PARTS LIST

A-717

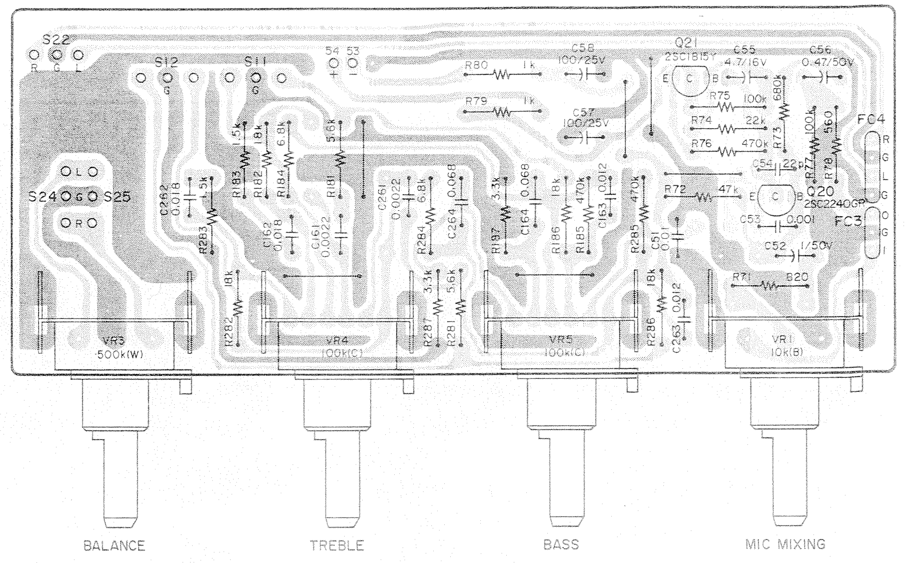
MAIN PCB ASSY


PHONO
EUROPE ONLY
C501,C502 EUROPE ONLY
C503,C504 C551,C552 EUROPE ONLY
Q101 Q201 2SK170Y×4
Q102 Q202
IC101
Q7 2SC1815Y
Q8 2SC1815Y
Q9 2SC1815Y
Q10 2SC1627AY
Q11 2SD880Y
Q12 2SC1815Y
Q114 2SC1815Y
Q214 2SC1815Y
RY1
L201 2.2μH
L101 2.2μH
R252 6.8(1W)
R152 6.8(1W)
R250 10(1W)
R150 10(1W)
C27 4700/63V
C26 4700/63V
D10 DSA26C
D9 DSA26C
D12 DSA26C
D11 DSA26C
C29
C28
F2
F1
F1,F2 — F250V 5A
BLK
YEL
TP1
TP3
TP5
TP6
TP7
R247 0.33(5W)×2
R147 0.33(5W)×2
Q212 2SD718O
Q113 2SB688O
Q213 2SB688O
Q112 2SD718O
Q209 2SC1815Y
Q109 2SC1815Y
S1
TP9 TP8
Q2 2SD880Y
Q3 2SK246Y
Q5 2SB834Y
Q6 2SK246Y
Q210 2SC2235Y
Q211 2SA965Y
Q208 2SC2235Y
Q207 2SC2240GR
Q206 2SC1815Y
Q205 2SC1815Y
Q106 2SC1815Y
Q105 2SC1815Y
Q107 2SC2240GR
Q108 2SC2235Y
Q110 2SC2235Y
Q111 2SA965Y
Q204
Q203 2SA970GR×2
Q104
Q103 2SA970GR×2
S10
S11
S12
S13
S14
D14 05Z-16Y
D15 05Z-16Y
D2 05Z-20Z
D13 SR1K4
R10 2.7k(1/2W)
R241 3.9k(1/2W)
R240 1.8k(1/2W)
BLU

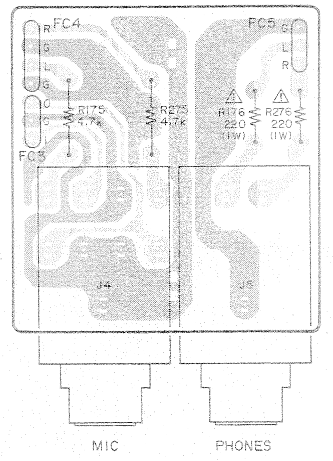
SELECTOR SW PCB ASSY


S13
S14
S1
S15
S16
S17
S18
S19
S20
S23
S21
FC10
FC9
FC1
FC2
PL1
PL2
PL3
PL4
PL5
PL6
PL7
SW1
LOUDNESS
PHONO MC
PHONO MM
CD/AUX
TUNER
TAPE 2
TAPE 1
TAPE COPY

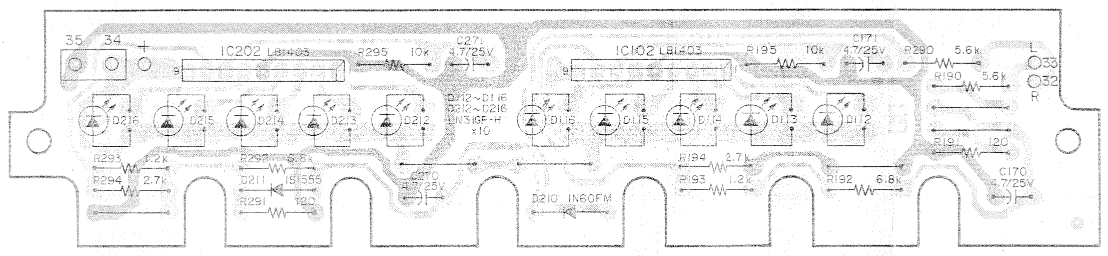
TONE & MIC PCB ASSY


S22
S12
S11
S24
S25
Q21
Q20
FC4
FC3
VR3 500k(W)
VR4 100k(C)
VR5 100k(C)
VR1 10k(B)
BALANCE
TREBLE
BASS
MIC MIXING

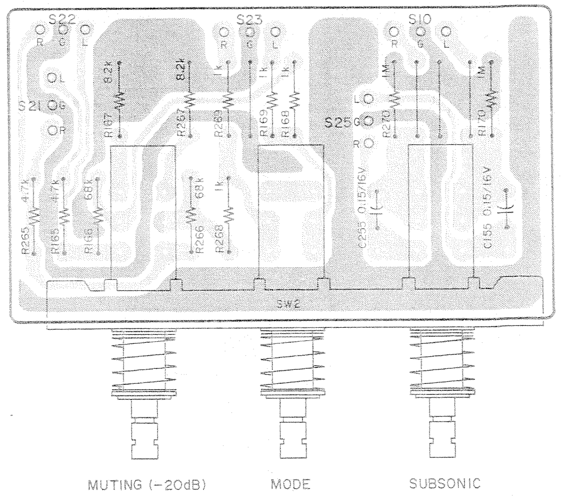
JACK PCB ASSY


FC4
FC5
FC3
R175 4.7k
R275 4.7k
R176 220 (1W)
R276 220 (1W)
J4
J5
MIC
PHONES

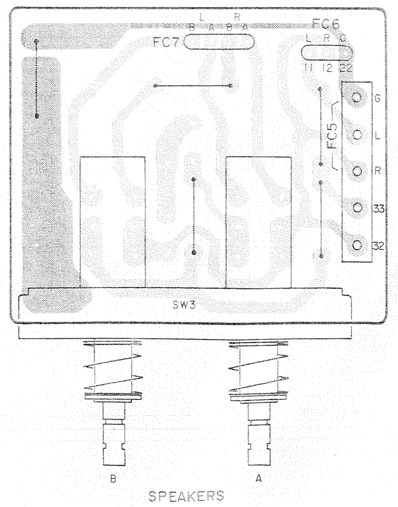
LED PCB ASSY


35
34
IC202 LB1403
IC102 LB1403
R295 10k
C271 4.7/25V
R195 10k
C171 4.7/25V
R290 5.6k
R190 5.6k
D112~D116
D212~D216
LN31GP-H ×10
D211 1S1555
D210 1N60FM
33
32

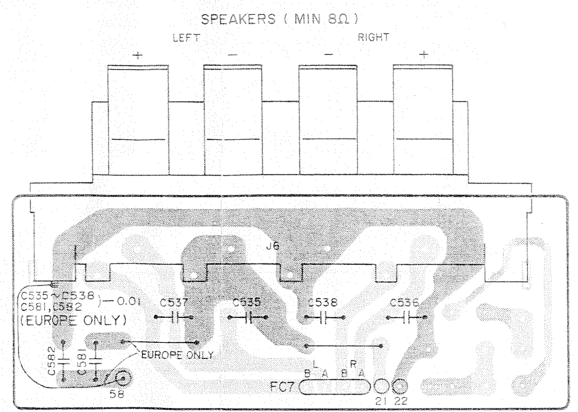
MUTING PCB ASSY


S22
S23
S10
S21
S25
SW2
MUTING (−20dB)
MODE
SUBSONIC

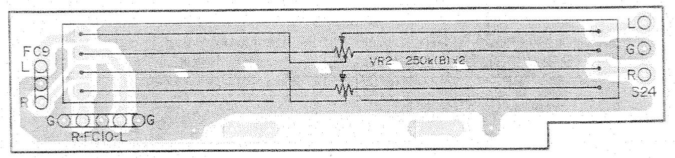
SPEAKER SW ASSY


FC6
FC7
FC5
SW3
B
A
SPEAKERS

SPEAKER TERMINAL PCB ASSY


SPEAKERS (MIN 8Ω)
LEFT
RIGHT
+
−
−
+
J6
C535~C538
C581,C582)—0.01
(EUROPE ONLY)
C537
C535
C538
C536
EUROPE ONLY
58
FC7
21 22

VOLUME PCB ASSY


FC9
VR2 250k(B)×2
R-FC10-L
S24

NOTES

1. The colors used on the PCB illustrations have the following significance:
   - ▒ : +B power supply circuit
   - ░ : −B power supply circuit
   - ■ : GND
   - ▨ : Other
2. Resistor values are in ohms (k=1,000 ohms, M=1,000,000 ohms).
3. Capacitor values are in microfarads (p=picofarads).
4. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

MAIN PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760483500	PCB Assy [E]
	5760483510	PCB Assy [GE, UK, A]
	5760431300	PCB
	IC	
IC101	5760337400	LA6458DS
	TRANSISTORS	
Q2	⚠5231755100	2SD880Y
Q3	5232005100	FET 2SK246Y
Q5	⚠5230505700	2SB834Y
Q6	5232005100	FET 2SK246Y
Q7~Q9	5230770300	2SC1815Y
Q10	5760121800	2SC1627AY
Q11	⚠5231755100	2SD880Y
Q12	⚠5230770300	2SC1815Y
Q101, Q201	5760102300	FET 2SK170Y
Q102, Q202	5760102300	FET 2SK170Y
Q103, Q203	5145149000	2SA970GR
Q104, Q204	5145149000	2SA970GR
Q105, Q205	5230770300	2SC1815Y
Q106, Q206	5230770300	2SC1815Y
Q107, Q207	5145153000	2SC2240GR
Q108, Q208	5145169000	2SC2235Y
Q109, Q209	5230770300	2SC1815Y
Q110, Q210	⚠5145169000	2SC2235Y
Q111, Q211	⚠5145168000	2SA965Y
Q112, Q212	⚠5145171000	2SD718O
Q113, Q213	⚠5145170000	2SB688O
Q114, Q214	5230770300	2SC1815Y
	DIODES	
D2	5224557106	Zener 05Z-20Z
D3	5042220000	1S1555
D4, D5	⚠5760494400	SR1K-4
D6	5224557706	Zener 05Z-24Z
D7	5224552906	Zener 05Z-5.1Z
D8	⚠5760494400	SR1K-4
D9~D12	⚠5760340000	DSA-26C
D13	5760494400	SR1K-4
D14, D15	5224556400	Zener 05Z-16Y
D101, D201	5042220000	1S1555
D102, D201	5042220000	1S1555
	RESISTORS **All resistors are rated ±5% tolerance, ¼ watt and are carbon type unless otherwise noted.**	
R4	⚠5184261000	330Ω Nonflammable
R8	⚠5184261000	330Ω Nonflammable
R10	⚠5182032000	2.7kΩ ½W Nonflammable
R11	⚠5184249000	100Ω Nonflammable
R12	5181298000	4.7kΩ
R13	5181302000	6.8kΩ
R14	5181322000	47kΩ
R15	5181302000	6.8kΩ
R16	5181348000	560kΩ
R17	5181326000	68kΩ
R18	5181312000	18kΩ
R19	5760340500	1kΩ 1W Metal Film
R20	5181296000	3.9kΩ
R21	5181306000	10kΩ
R22	5185211000	2.2kΩ Fusible
R23	⚠5760494900	100Ω 1W Metal Film
R24	5181274000	470Ω
R25	⚠5182032000	2.7kΩ ½W
R26	5181326000	68kΩ
R27	5181314000	22kΩ
R28	5181300000	5.6kΩ
R29	5181300000	5.6kΩ
R101, R201	5181258000	100Ω
R102, R202	5181322000	47kΩ
R103, R203	5181242000	22Ω [GE, UK, A]
R103, R203	5181270000	330Ω [E]
R104, R204	5181298000	4.7kΩ
R105, R205	5181298000	4.7kΩ
R106, R206	5181272000	390Ω
R107, R207	5181298000	4.7kΩ
R108, R208	5181260000	120Ω
R109, R209	5181234000	10Ω
R110, R210	5181326000	68kΩ
R111, R211	5181300000	5.6kΩ
R112, R212	5181300000	5.6kΩ
R113, R213	5181260000	120Ω
R114, R214	5181276000	560Ω
R115, R215	5181342000	330kΩ
R120, R220	5181282000	1kΩ
R121, R221	5181324000	56kΩ
R122, R222	5181246000	33Ω
R123, R223	5181246000	33Ω
R124, R224	5181306000	10kΩ
R125, R225	5181274000	470Ω
R126, R226	5181270000	330Ω
R127, R227	5181270000	330Ω
R128, R228	5181322000	470kΩ
R130, R230	5181276000	560Ω
R131, R231	5181306000	10kΩ
R132, R232	5181274000	470kΩ
R133, R233	5181258000	100Ω
R134, R234	5181306000	10kΩ
R135, R235	5181308000	12kΩ
R136, R236	5181292000	2.7kΩ
R137, R237	5181262000	150Ω
R138, R238	5181254000	68Ω
R139, R239	5181284000	1.2kΩ
R140, R240	5180088000	1.8kΩ ½W
R141, R241	5180096000	3.9kΩ ½W
R142, R242	5181280000	820Ω
R143, R243	5181280000	820Ω
R144, R244	⚠5184259000	270Ω Nonflammable
R145, R245	⚠5184257000	220Ω Nonflammable
R146, R246	⚠5184257000	220Ω Nonflammable
R147, R247	⚠5760120600	0.33Ω 5W x 2 10% Cemment
R148, R248	5181290000	2.2kΩ
R149, R249	5181310000	15kΩ

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

REF. NO.	PARTS NO.	DESCRIPTION
R150, R250	⚠5760140900	10Ω 1W Metal Film
R151, R251	5181298000	4.7kΩ
R152, R252	⚠5760140800	6.8Ω 1W Metal Film
	CAPACITORS	
C1	5172336000	Ceramic 0.01μF 50V
C3	5260162650	Elec. 100μF 25V
C7	5260164452	Elec. 33μF 25V
C11	5260164452	Elec. 33μF 25V
C12	5173054800	Elec. 220μF 16V
C13	5260165252	Elec. 47μF 25V
C16	5173312000	Elec. 220μF 63V
C17	5260071400	Elec. 220μF 16V (BP)
C18	5173310000	Elec. 47μF 63V
C19	5260166852	Elec. 220μF 10V
C20	5260162150	Elec. 4.7μF 50V
C21	5260162150	Elec. 4.7μF 50V
C24	5260162150	Elec. 4.7μF 50V
C25	5260162750	Elec. 10μF 35V
C26, C27	⚠5760494300	Elec. 4700μF 63V
C28, C29	⚠5760334200	Mylar 0.033μF 250V AC [E]
C28, C29	⚠5760348600	Ceramic 0.01μF 250V AC [All except E]
C101, C201	5172324000	Ceramic 0.001μF 50V [All except E]
C102, C202	5172310000	Ceramic 68pF 50V [All except E]
C103, C203	5172324000	Ceramic 0.001μF 50V
C104, C204	5172320000	Ceramic 470pF 50V
C105, C205	5173086000	Elec. 2200μF 6.3V
C106, C206	5054738800	Mylar 0.047μF 50V
C107, C207	5054877800	Mylar 0.01μF 50V
C108, C208	5054881800	Mylar 0.0033μF 50V
C109, C209	5260161550	Elec. 3.3μF 50V
C110, C210	5054813000	Mylar 0.0047μF 50V
C115, C215	5260161550	Elec. 3.3μF 50V
C117, C217	5172320000	Ceramic 470pF 50V [All except E]
C117, C217	5172324000	Ceramic 0.001μF 50V [E]
C118, C218	5260166852	Elec. 220μF 10V
C119, C219	5172306000	Ceramic 33pF 50V
C120, C220	5172310000	Ceramic 68pF 50V
C121, C221	5260165252	Elec. 47μF 16V
C122, C222	5260165252	Elec. 47μF 16V
C123, C223	5172313000	Ceramic 120pF 50V [All except E]
C123, C223	5172318000	Ceramic 330pF 50V [E]
C124, C224	5760219100	Ceramic 5pF 500V
C125, C225	5173047800	Elec. 100μF 35V
C126, C226	5760225900	Ceramic 100pF 500V
C127, C227	5172324000	Ceramic 0.001μF 50V
C128, C228	5260162650	Elec. 100μF 25V
C129, C229	5172320000	Ceramic 470pF 50V
C130, C230	5172320000	Ceramic 470pF 50V
C131, C231	5760225100	Ceramic 47pF 500V
C132, C232	5760225100	Ceramic 47pF 500V
C133, C233	5054827000	Mylar 0.047μF 50V
C134, C234	5054827000	Mylar 0.047μF 50V
C501, C502	5172318000	Ceramic 330pF 50V [E]
C503, C504	5172303000	Ceramic 18pF 50V [E]
C551 ~ C554	5172336000	Ceramic 0.01μF 50V [E]
C555	5760496100	Ceramic 0.01μF 500V [E]
C556	5172336000	Ceramic 0.01μF 50V [E]
C557	5260160750	Elec. 1μF 50V [E]
	MISCELLANEOUS	
L101, L201	5760120900	Coil, 2.2μH
RY1	5760121000	Relay, G2Z-222P-US
J1	5760142100	Jack, Pin; 2P
F1, F2	⚠5142174000	Fuse, F5A 250V
	5142087000	Holder, Fuse
	5760121500	Heatsink, B
	5760102200	Heatsink
	5760115500	Pin, Lapping (9 used)
	5760115600	Pin, Lapping; 2P (2 used)
	5760115700	Pin, Lapping; 3P (3 used)
	5760115800	Pin, Lapping; 4P (1 used)

SELECTOR SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760483600	PCB Assy
	5760431500	PCB
	CARBON RESISTORS	
R161, R261	5181324000	56kΩ ¼W 5%
R162, R262	5181312000	18kΩ ¼W 5%
	CAPACITORS	
C150, C250	5172318000	Ceramic 330pF 50V
C151, C251	5054855000	Mylar 0.018μF 50V
	MISCELLANEOUS	
SW1	5760340900	Switch, Push
	5760341000	Pin, Lapping; 12P (2 used)
	5760115700	Pin, Lapping; 3P (1 used)
PL1 ~ PL7	5760481500	Lamp, 28V 24mA

JACK PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760483800	PCB Assy
	5760431700	PCB
	RESISTORS	
R175, R275	5181298000	Carbon 4.7kΩ ¼W 5%
R176, R276	⚠5760339500	Metal Film 220Ω 1W 5%
	JACKS	
J4	5760485000	MIC
J5	5760485100	PHONES

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

TONE & MIC PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760483700	PCB Assy
	5760431600	PCB
	TRANSISTORS	
Q20	5145153000	2SC2240GR
Q21	5230770300	2SC1815Y
	CARBON RESISTORS **All resistors are rated ± 5% tolerance and ¼ watt unless otherwise noted.**	
R71	5181280000	820Ω
R72	5181322000	47kΩ
R73	5181350000	680kΩ
R74	5181314000	22kΩ
R75	5181330000	100kΩ
R76	5181274000	470Ω
R77	5181330000	100kΩ
R78	5181276000	560Ω
R79, R80	5184273000	1kΩ Nonflammable
R181, R281	5181300000	5.6kΩ
R182, R282	5181312000	18kΩ
R183, R283	5181286000	1.5kΩ
R184, R284	5181302000	6.8kΩ
R185, R285	5181346000	470kΩ
R186, R286	5181312000	18kΩ
R187, R287	5181294000	3.3kΩ
	CAPACITORS	
C51	5172336000	Ceramic 0.01µF 50V
C52	5260160750	Elec. 1µF 50V
C53	5172324000	Ceramic 0.001µF 50V
C54	5172304000	Ceramic 22pF 50V
C55	5260165252	Elec. 47µF 16V
C56	5260160550	Elec. 0.47µF 50V
C57, C58	5260166152	Elec. 100µF 25V
C161, C261	5054845000	Mylar 0.0022µF 50V
C162, C262	5054855000	Mylar 0.018µF 50V
C163, C263	5054862000	Mylar 0.012µF 50V
C164, C264	5054854000	Mylar 0.068µF 50V
	VARIABLE RESISTORS	
VR1	5760341200	10kΩ (B)
VR3	5760339100	500kΩ (W)
VR4, VR5	5760339200	100kΩ (C)

LED PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760484300	PCB Assy
	5760432300	PCB
	IC's	
IC102	5760336500	LB1403
IC202	5760336500	LB1403
	DIODES	
D110, D210	5042213000	1N60FM
D111, D211	5042220000	1S1555
D112, D212	5760334700	LED, LN31GPH
D113, D213	5760334700	LED, LN31GPH
D114, D214	5760334700	LED, LN31GPH
D115, D215	5760334700	LED, LN31GPH
D116, D216	5760334700	LED, LN31GPH
	CARBON RESISTORS **All resistors are rated ± 5% tolerance and ¼ watt.**	
R190, R290	5181300000	5.6kΩ
R191, R291	5181260000	120Ω
R192, R292	5181302000	6.8kΩ
R193, R293	5181284000	1.2kΩ
R194, R294	5181292000	2.7kΩ
R195, R295	5181306000	10kΩ
	CAPACITORS	
C170, C270	5260165252	Elec. 4.7µF 25V
C171, C271	5260165252	Elec. 4.7µF 25V
	5760485400	Pin, Lapping; 2P

MUTING PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760484000	PCB Assy
	5760431900	PCB
	CARBON RESISTORS **All resistors are rated ± 5% tolerance and ¼ watt.**	
R165, R265	5181298000	4.7kΩ
R166, R266	5181326000	68kΩ
R167, R267	5181304000	8.2kΩ
R168, R268	5181282000	1kΩ
R169, R269	5181282000	1kΩ
R170, R270	5181354000	1MΩ
	CAPACITORS	
C155, C255	5172024000	Tant. 0.15µF 16V
	SWITCH	
SW2	5760341500	Push

VOLUME PCB ASSY

REF. No.	PARTS NO.	DESCRIPTION
	5760484200	PCB Assy
	5760432200	PCB
	5760485300	Var. Res., 250kΩ (B) x 2

SPEAKER SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760484100	PCB Assy
	5760432000	PCB
	5760485200	Switch, Push
	5760116100	Pin, Lapping; 5P

SPEAKER TERMINAL PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION			
	5760483900	PCB Assy [E]			
	5760483910	PCB Assy [All except E]			
	5760431800	PCB			
	CAPACITORS				
C535~C538	5172336000	Ceramic	0.01μF	50V	[E]
C581, C582	5172336000	Ceramic	0.01μF	50V	[E]
J6	5760102700	Terminal, Push; 8P			

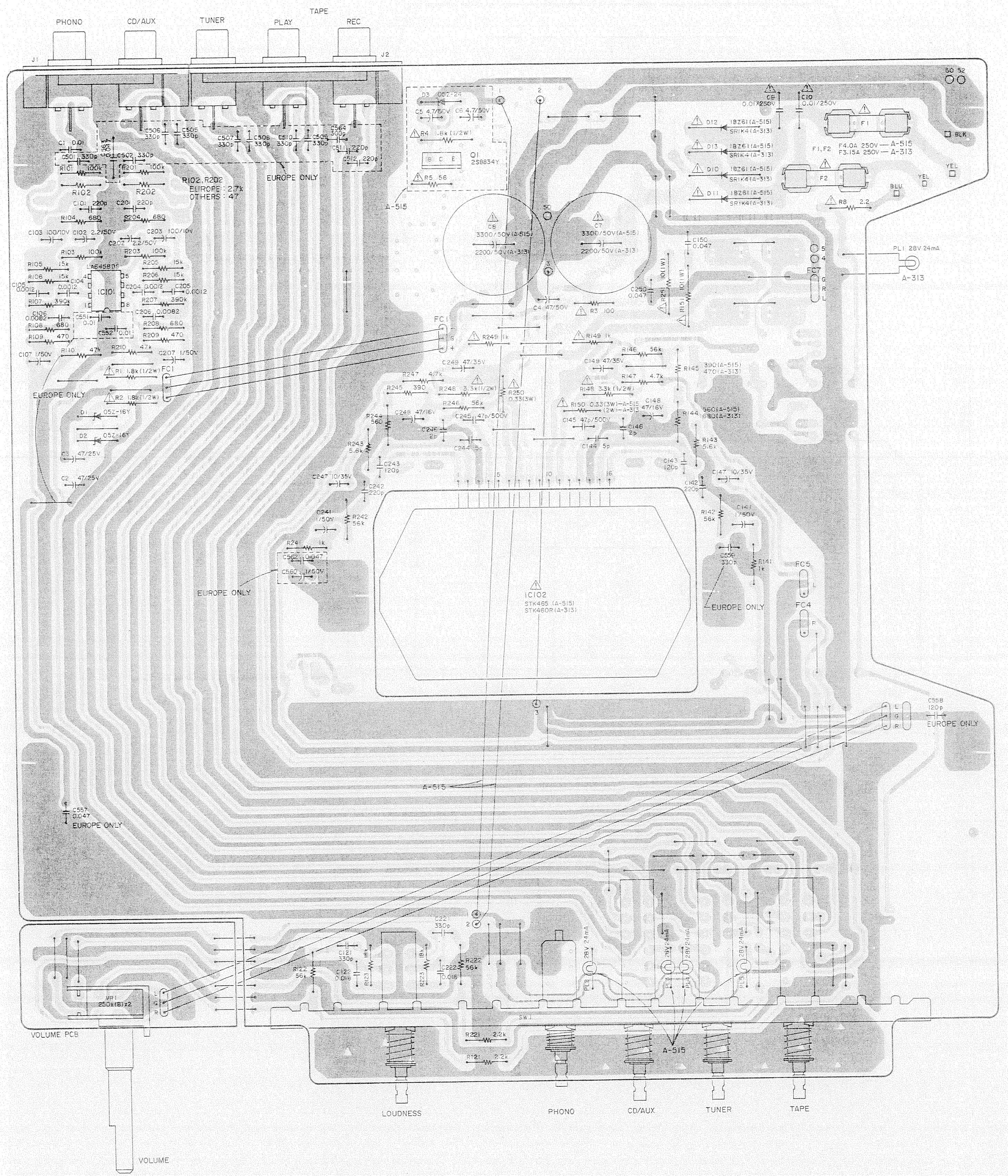
POWER SW PCB ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5760481100	PCB Assy [GE]
	5760481110	PCB Assy [E]
	5760481120	PCB Assy [UK, A]
	5760252600	PCB
SW4	⚠5300030800	Switch, Power
Z2	⚠5760335600	Spark Killer 0.01μF/250V AC [GE]
Z2	⚠5267703100	Spark Killer 0.01μF/250V AC [UK, A]
Z1, Z2	⚠5267703100	Spark Killer 0.01μF/250V AC [E]
	5760115500	Pin, Lapping [E, UK, A]

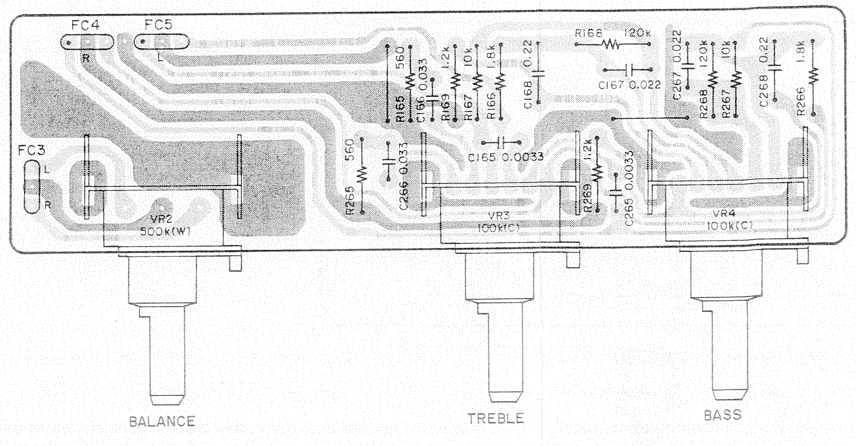
[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

A-515/A-313

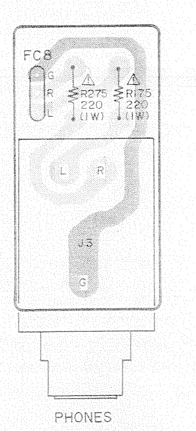
MAIN PCB ASSY/ VOLUME PCB ASSY


PHONO
CD/AUX
TUNER
TAPE
PLAY
REC
J1
J2
EUROPE ONLY
R102, R202
EUROPE : 2.7k
OTHERS : 47
IC101
Q1
2SB834Y
A-515
C8
3300/50V (A-515)
2200/50V (A-313)
C7
3300/50V (A-515)
2200/50V (A-313)
D12
D13
D10
D11
1B2611(A-515)
SR1K4(A-313)
F1
F2
F1, F2
F4.0A 250V — A-515
F3.15A 250V — A-313
BLK
BLU
YEL
PL1 28V 24mA
A-313
FC1
FC5
FC4
FC7
IC102
STK465 (A-515)
STK460P(A-313)
C558 120p
A-515
C557 0.047
VR1 250k(B)×2
VOLUME PCB
SW1
LOUDNESS
PHONO
CD/AUX
TUNER
TAPE
VOLUME

TONE PCB ASSY


FC4
FC5
FC3
R168 120k
C167 0.022
C165 0.0033
VR2
500k(W)
VR3
100k(C)
VR4
100k(C)
BALANCE
TREBLE
BASS

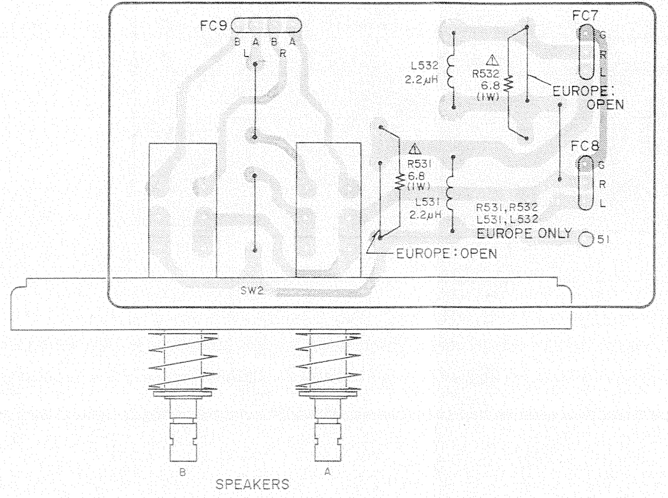
HEADPHONE PCB ASSY


FC8
R275 220 (1W)
R175 220 (1W)
J3
PHONES

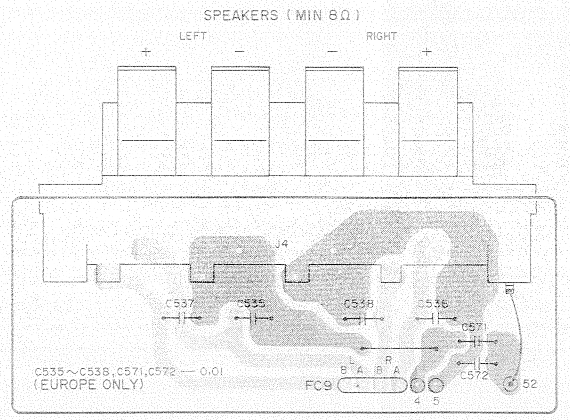
NOTES

1. The colors used on the PCB illustrations have the following significance:
   - ░ : +B power supply circuit
   - ░ : –B power supply circuit
   - ▓ : GND
   - ▒ : Other
2. Resistor values are in ohms (k=1,000 ohms).
3. Capacitor values are in microfarads (p=picofarads).
4. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

SPEAKER SW PCB ASSY

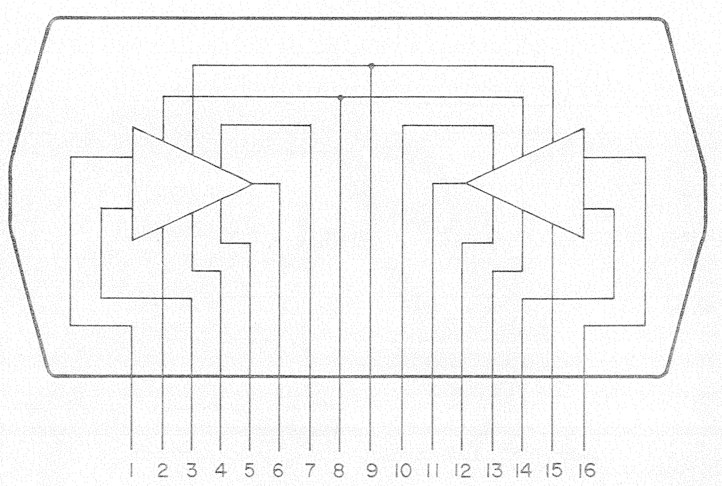

FC9
B A B A
L R
L532
2.2μH
⚠
R532
6.8
(1W)
EUROPE:
OPEN
FC7
G
R
L
FC8
G
R
L
⚠
R531
6.8
(1W)
L531
2.2μH
R531, R532
L531, L532
EUROPE ONLY
51
EUROPE: OPEN
SW2
B
SPEAKERS
A

SPEAKER TERMINAL PCB ASSY

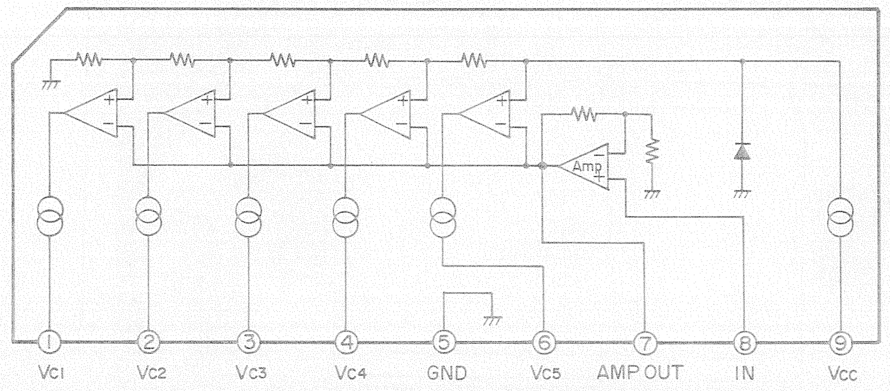

SPEAKERS (MIN 8Ω)
LEFT
RIGHT
+
−
−
+
J4
C537
C535
C538
C536
C571
C572
C535～C538, C571, C572 — 0.01
(EUROPE ONLY)
L
R
B A B A
FC9
4 5
52

IC BLOCK DIAGRAMS

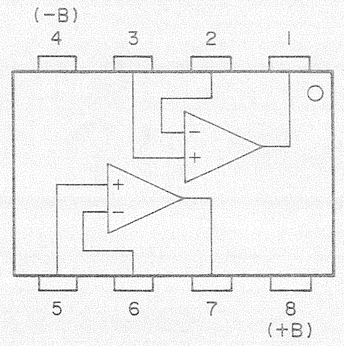
STK465
STK460A


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

LB1403


Amp
1
2
3
4
5
6
7
8
9
Vc1
Vc2
Vc3
Vc4
GND
Vc5
AMP OUT
IN
Vcc

LA6458DS


(−B)
4
3
2
1
5
6
7
8
(+B)

MAIN PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760481900	PCB Assy (A-515) [E]
	5760481910	PCB Assy (A-515) [All except E]
	5760480500	PCB Assy (A-313) [E]
	5760480510	PCB Assy (A-313) [All except E]
	5760430700	PCB
	IC's	
IC101	5760337400	LA6458DS
IC102	⚠5760337500	STK465 (A-515)
IC102	⚠5760404100	STK460A (A-313)
	TRANSISTOR	
Q1	5230505700	2SB834Y (A-515)
	DIODES	
D1, D2	5224556406	Zener 05Z-16Y
D3	5224557706	Zener 05Z-24Z (A-515)
D10~D13	⚠5760495000	1BZ61 (A-515)
D10~D13	⚠5760494400	SR1K-4 (A-313)
	RESISTORS **All resistors are rated ±5% tolerance, ¼ watt and are carbon type unless otherwise noted.**	
R1, R2	⚠5182028000	1.8kΩ ½W Nonflammable (A-515)
R1, R2	⚠5182026000	1.5kΩ ½W Nonflammable (A-313)
R3	⚠5184249000	100Ω Nonflammable
R4	⚠5182028000	1.8kΩ ½W Nonflammable (A-515)
R5	⚠5184143000	56Ω Nonflammable (A-515)
R101, R201	5181330000	100kΩ
R102, R202	5181250000	47Ω [All except E]
R102, R202	5181292000	2.7kΩ [E]
R103, R203	5181330000	100kΩ
R104, R204	5181278000	680Ω
R105, R205	5181310000	15kΩ
R106, R206	5181310000	15kΩ
R107, R207	5181344000	390kΩ
R108, R208	5181278000	680Ω
R109, R209	5181274000	470Ω
R110, R210	5181322000	47kΩ
R121, R221	5181290000	2.2kΩ
R122, R222	5181324000	56kΩ
R123, R223	5181312000	18kΩ
R141, R241	5181282000	1kΩ
R142, R242	5181324000	56kΩ
R143, R243	5181300000	5.6kΩ
R144, R244	5181276000	560Ω (A-515)
R144, R244	5181278000	680Ω (A-313)
R145, R245	5181272000	390Ω (A-515)
R145, R245	5181274000	470Ω (A-313)
R146, R246	5181324000	56kΩ
R147, R247	5181298000	4.7kΩ
R148, R248	⚠5180094000	3.3kΩ ½W
R149, R249	⚠5184273000	1kΩ Nonflammable
R150, R250	⚠5760338500	0.33Ω 3W Cement (A-515)
R150, R250	⚠5760494700	0.33Ω 2W Metal Film (A-313)
R151, R251	⚠5760140900	10Ω 1W Metal Film
	CAPACITORS	
C1	5172336000	Ceramic 0.01μF 50V
C2, C3	5260165252	Elec. 47μF 25V
C4	5260165452	Elec. 47μF 50V
C5, C6	5260162150	Elec. 4.7μF 50V (A-515)
C7, C8	⚠5760337900	Elec. 3300μF 50V (A-515)
C7, C8	⚠5260190500	Elec. 2200μF 35V (A-313)
C9, C10	⚠5760348600	Ceramic 0.01μF 250V AC
C101, C201	5172316000	Ceramic 220pF 50V
C102, C202	5260161150	Elec. 2.2μF 50V
C103, C203	5260165952	Elec. 100μF 10V
C104, C204	5054886800	Mylar 0.0012μF 50V
C105, C205	5054886800	Mylar 0.0012μF 50V
C106, C206	5054894800	Mylar 0.0082μF 50V
C107, C207	5260160750	Elec. 1μF 50V
C121, C221	5172318000	Ceramic 330pF 50V
C122, C222	5054855000	Mylar 0.018μF 50V
C141, C241	5260160750	Elec. 1μF 50V
C142, C242	5172316000	Ceramic 220pF 50V
C143, C243	5172313000	Ceramic 120pF 50V
C144, C244	5760338000	Ceramic 5pF 50V
C145, C245	5760225100	Ceramic 47pF 500V
C146, C246	5760338100	Ceramic 2pF 50V
C147, C247	5260162750	Elec. 10μF 35V
C148, C248	5260165252	Elec. 47μF 16V
C149, C249	5260165352	Elec. 47μF 35V
C150, C250	5054827000	Mylar 0.047μF 50V
C501, C502	5172318000	Ceramic 330pF 50V [E]
C505~C510	5172318000	Ceramic 330pF 50V [E]
C511, C512	5172316000	Ceramic 220pF 50V [E]
C551, C552	5172336000	Ceramic 0.01μF 50V [E]
C557	5172344000	Ceramic 0.047μF 50V [E]
C558	5172313000	Ceramic 120pF 50V [E]
C559	5172318000	Ceramic 330pF 50V [E]
C560	5260160750	Elec. 1μF 50V [E]
C562, C563	5172344000	Ceramic 0.047μF 50V [E]
C564	5172318000	Ceramic 330pF 50V [E]
	MISCELLANEOUS	
PL1	5760482500	Lamp, 28V 24 mA (A-313)
PL2~PL5	5760481500	Lamp, 28V 24 mA (A-515)
SW1	5760338800	Switch, Push
F1, F2	⚠5142174000	Fuse, F4.0A 250V (A-515)
F1, F2	⚠5142172000	Fuse, F3.15A 250V (A-313)
	5142087000	Holder, Fuse
J1	5760339000	Jack, Pin; 4P
J2	5760338000	Jack, Pin; 6P
	5760115500	Pin, Lapping

VOLUME PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760480800	PCB Assy
	5760430800	PCB
	5760339400	Var. Res., 250 kΩ (B) x 2

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

TONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760480600	PCB Assy
	5760430900	PCB
	CARBON RESISTORS **All resistors are rated ± 5% tolerance and ¼ watt.**	
R165, R265	5181276000	560Ω
R166, R266	5181288000	1.8kΩ
R167, R267	5181306000	10kΩ
R168, R268	5181332000	120kΩ
R169, R269	5181284000	1.2kΩ
	CAPACITORS	
C165, C265	5054830000	Mylar 0.0033μF 50V
C166, C266	5054824000	Mylar 0.033μF 50V
C167, C267	5054829000	Mylar 0.022μF 50V
C168, C268	5054866000	Mylar 0.22μF 50V
	VARIABLE RESISTORS	
VR2	5760339100	500kΩ (W)
VR3, VR4	5760339200	100kΩ (C) x 2

HEADPHONE PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760482000	PCB Assy (A-515)
	5760480900	PCB Assy (A-313)
	5760431000	PCB
J3	5760485100	Jack, PHONES (A-515)
J3	5760481700	Jack, PHONES (A-313)
R175, R275	⚠5760339500	Resistor, 220Ω 1W Metal Film

SPEAKER SW PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760480700	PCB Assy [E]
	5760480710	PCB Assy [All except E]
	5760431100	PCB
R531, R532	⚠5760140800	Resistor, 6.8Ω 1W 5% Metal Film [E]
L531, L532	5760120900	Coil, 2.2μH [E]
SW2	5760481600	Switch, Push

SPEAKER TERMINAL PCB ASSY

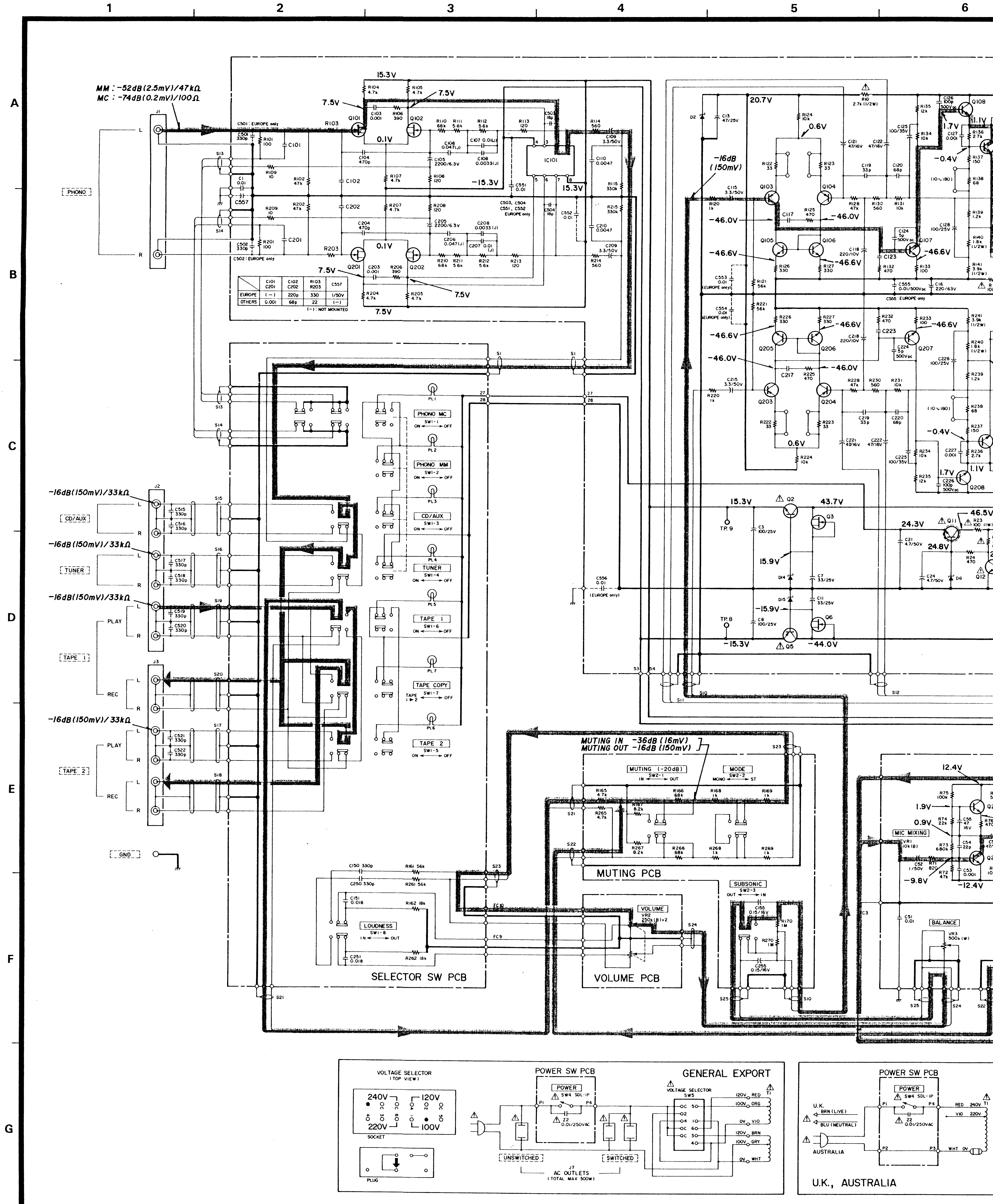
REF. NO.	PARTS NO.	DESCRIPTION
	5760481000	PCB Assy [E]
	5760481010	PCB Assy [All except E]
	5760431200	PCB
C535~C538	5172336000	Capacitor, Ceramic 0.01μF 50V [E]
C571, C572	5172336000	Capacitor, Ceramic 0.01μF 50V [E]
J4	5760102700	Terminal, Push; 8P

POWER SW PCB ASSY (PC Board Omitted)

REF. NO.	PARTS NO.	DESCRIPTION
	5760481100	PCB Assy [GE]
	5760481110	PCB Assy [E]
	5760481120	PCB Assy [UK, A]
	5760252600	PCB
SW4	⚠5300030800	Switch, Power
Z2	⚠5760335600	Spark Killer 0.01μF/250V AC [GE]
Z2	⚠5267703100	Spark Killer 0.01μF/250V AC [UK, A]
Z1, Z2	⚠5267703100	Spark Killer 0.01μF/250V AC [E]
	5760115500	Pin, Lapping [E, UK, A]

[GE]: GENERAL EXPORT [E]: EUROPE [UK]: U.K. [A]: AUSTRALIA [SA]: SOUTH AFRICA

TEAC SCHEMATIC DIAGRAM **A-717**

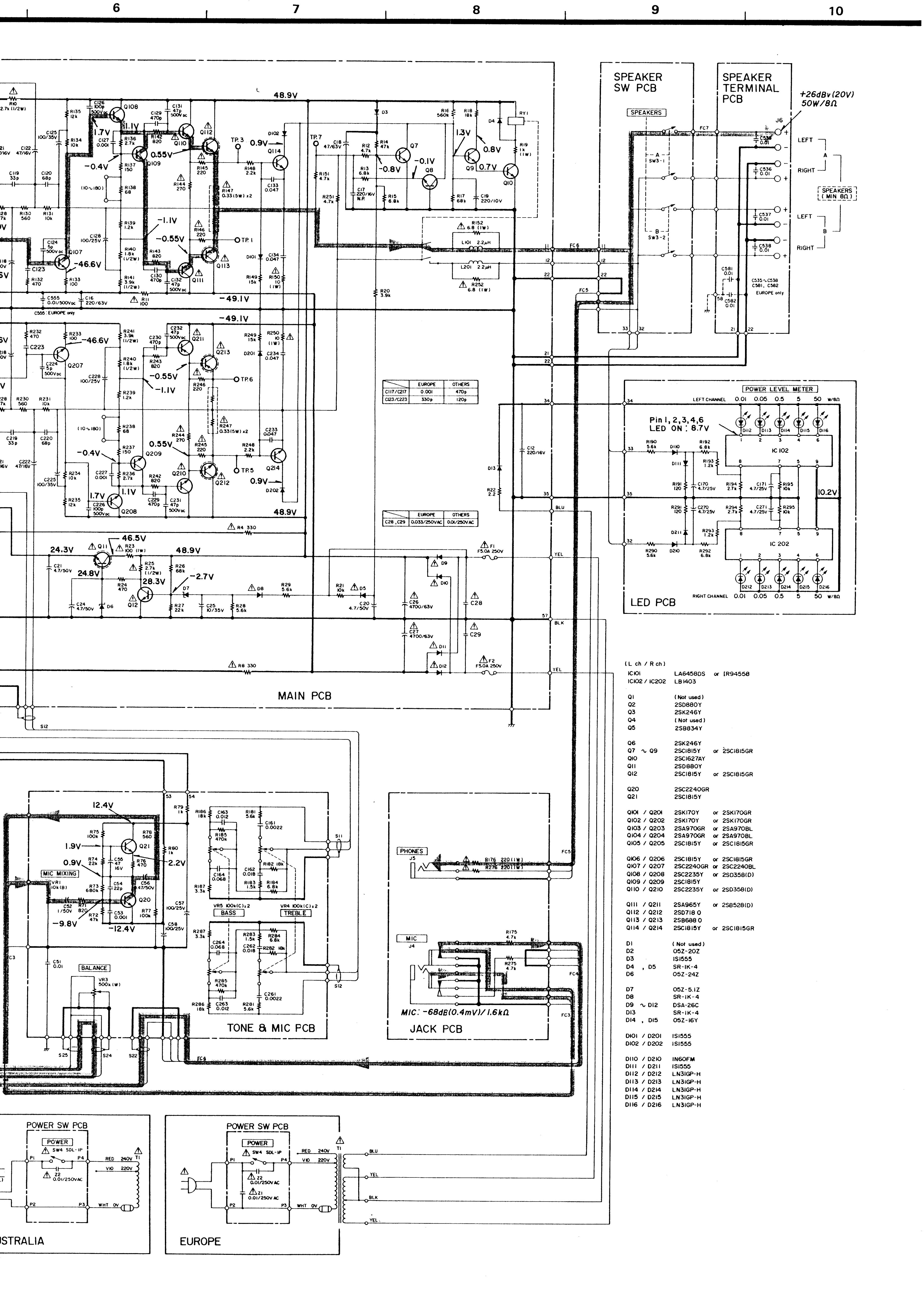

1
2
3
4
5
6
A
B
C
D
E
F
G
H
MM : -52dB(2.5mV)/47kΩ
MC : -74dB(0.2mV)/100Ω
PHONO
CD/AUX
TUNER
TAPE 1
TAPE 2
GND
PLAY
REC
-16dB(150mV)/33kΩ
-16dB (150mV)
15.3V
7.5V
0.1V
-15.3V
IC101
Q101
Q102
Q201
Q202
20.7V
-46.0V
-46.6V
0.6V
15.9V
-15.9V
-15.3V
43.7V
-44.0V
24.3V
24.8V
46.5V
PHONO MC
PHONO MM
CD/AUX
TUNER
TAPE 1
TAPE COPY
TAPE 2
SW1-1
SW1-2
SW1-3
SW1-4
SW1-6
SW1-7
SW1-5
ON OFF
LOUDNESS
SW1-8
SELECTOR SW PCB
MUTING IN -36dB (16mV)
MUTING OUT -16dB (150mV)
MUTING (-20dB)
SW2-1
MODE
SW2-2
MONO ST
MUTING PCB
VOLUME
VR2
VOLUME PCB
SUBSONIC
SW2-3
OUT IN
12.4V
1.9V
0.9V
MIC MIXING
-9.8V
-12.4V
BALANCE
VR3
VOLTAGE SELECTOR (TOP VIEW)
240V
120V
220V
100V
SOCKET
PLUG
POWER SW PCB
POWER
SW4 SDL-1P
GENERAL EXPORT
VOLTAGE SELECTOR SW5
UNSWITCHED
SWITCHED
J7
AC OUTLETS
(TOTAL MAX 300W)
U.K.
BRN (LIVE)
BLU (NEUTRAL)
AUSTRALIA
U.K., AUSTRALIA

NOTES

1. All resistors are 1/4W, ±5%, unless otherwise noted. Resistor values are in ohms (k = kilo-ohms, M = meg-ohms).
2. All capacitor values are in microfarads (p=pico-farads).
3. 0 dB=1 V
4. The DC voltages given in each portion are reference values measured under no-signal conditions.
5. ⚠ Parts marked with this must always be replaced w appropriate parts list and ensu
6. ——— : +B power supply
7. ——— : –B power supply
8. ➡ : Audio signal path (s
9. ▭ : Front panel indicat
10. [-----] : Rear panel indicatio

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.


6
7
8
9
10
SPEAKER SW PCB
SPEAKERS
SPEAKER TERMINAL PCB
+26dBv(20V) 50W/8Ω
LEFT
RIGHT
A
B
SPEAKERS (MIN 8Ω)
C535~C538 C581, C582 EUROPE only
POWER LEVEL METER
LEFT CHANNEL 0.01 0.05 0.5 5 50 W/8Ω
Pin 1,2,3,4,6 LED ON : 8.7V
IC 102
IC 202
10.2V
RIGHT CHANNEL 0.01 0.05 0.5 5 50 W/8Ω
LED PCB
48.9V
-49.1V
46.5V
24.3V
24.8V
28.3V
-2.7V
MAIN PCB
12.4V
1.9V
0.9V
2.2V
-9.8V
-12.4V
MIC MIXING
BALANCE
BASS
TREBLE
TONE & MIC PCB
PHONES
MIC
MIC: -68dB(0.4mV)/1.6kΩ
JACK PCB
POWER SW PCB
POWER
STRALIA
EUROPE

	EUROPE	OTHERS
C117/C217	0.001	470p
C123/C223	330p	120p

	EUROPE	OTHERS
C28 , C29	0.033/250VAC	0.01/250VAC

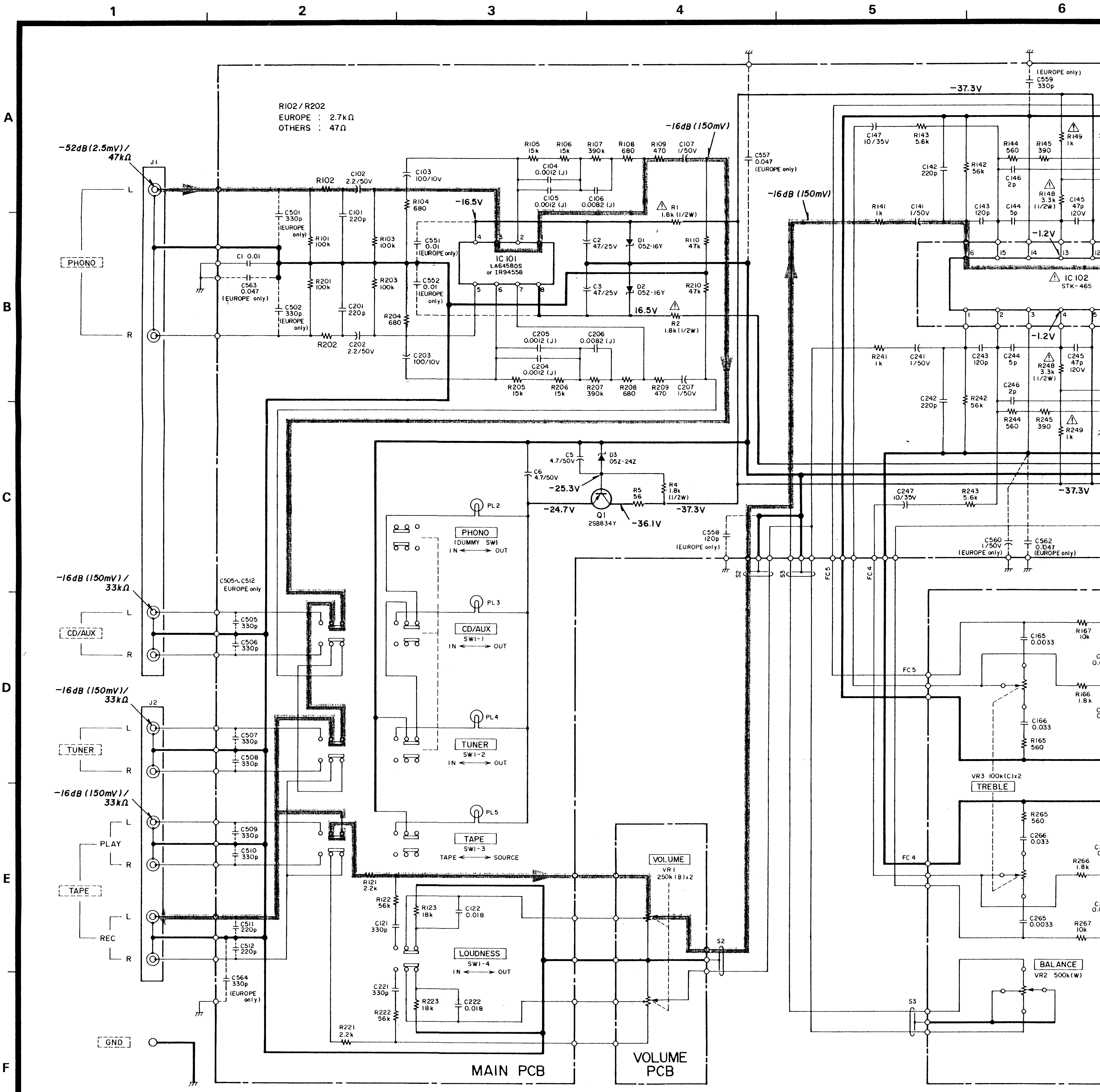
(L ch / R ch)		
IC101	LA6458DS	or IR94558
IC102 / IC202	LB1403	
Q1	(Not used)	
Q2	2SD880Y	
Q3	2SK246Y	
Q4	(Not used)	
Q5	2SB834Y	
Q6	2SK246Y	
Q7 ∿ Q9	2SC1815Y	or 2SC1815GR
Q10	2SC1627AY	
Q11	2SD880Y	
Q12	2SC1815Y	or 2SC1815GR
Q20	2SC2240GR	
Q21	2SC1815Y	
Q101 / Q201	2SK170Y	or 2SK170GR
Q102 / Q202	2SK170Y	or 2SK170GR
Q103 / Q203	2SA970GR	or 2SA970BL
Q104 / Q204	2SA970GR	or 2SA970BL
Q105 / Q205	2SC1815Y	or 2SC1815GR
Q106 / Q206	2SC1815Y	or 2SC1815GR
Q107 / Q207	2SC2240GR	or 2SC2240BL
Q108 / Q208	2SC2235Y	or 2SD358(D)
Q109 / Q209	2SC1815Y	
Q110 / Q210	2SC2235Y	or 2SD358(D)
Q111 / Q211	2SA965Y	or 2SB528(D)
Q112 / Q212	2SD718 0	
Q113 / Q213	2SB688 0	
Q114 / Q214	2SC1815Y	or 2SC1815GR
D1	(Not used)	
D2	05Z-20Z	
D3	1S1555	
D4 , D5	SR-1K-4	
D6	05Z-24Z	
D7	05Z-5.1Z	
D8	SR-1K-4	
D9 ∿ D12	DSA-26C	
D13	SR-1K-4	
D14 , D15	05Z-16Y	
D101 / D201	1S1555	
D102 / D202	1S1555	
D110 / D210	1N60FM	
D111 / D211	1S1555	
D112 / D212	LN31GP-H	
D113 / D213	LN31GP-H	
D114 / D214	LN31GP-H	
D115 / D215	LN31GP-H	
D116 / D216	LN31GP-H	

5. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
6. ——— : +B power supply
7. ——— : −B power supply
8. ▬▶ : Audio signal path (shown for L ch only)
9. ▭ : Front panel indication
0. ⬚ : Rear panel indication

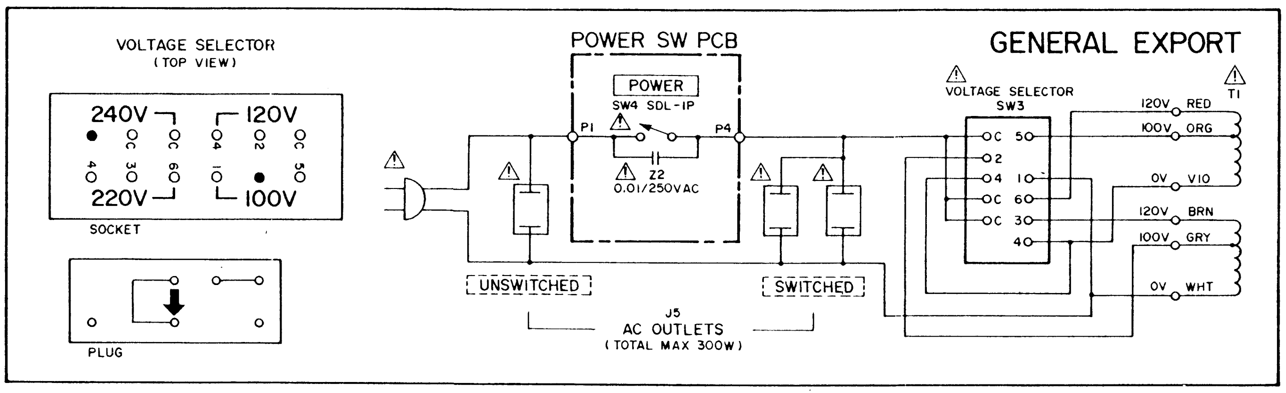
A-717 DC Integrated Stereo Amplifier

September 1983

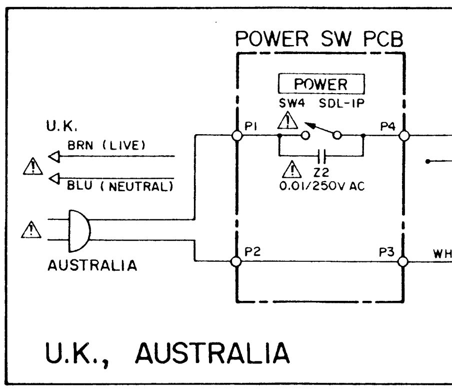
TEAC SCHEMATIC DIAGRAM A-515



1
2
3
4
5
6
A
B
C
D
E
F
G
H
R102/R202
EUROPE : 2.7kΩ
OTHERS : 47Ω
-52dB(2.5mV)/
47kΩ
J1
PHONO
L
R
R102
C102 2.2/50V
C103 100/10V
R104 680
-16.5V
C501 330p (EUROPE only)
C101 220p
R101 100k
R103 100k
C551 0.01 (EUROPE only)
C1 0.01
C563 0.047 (EUROPE only)
R201 100k
R203 100k
C552 0.01 (EUROPE only)
C502 330p (EUROPE only)
C201 220p
R204 680
R202
C202 2.2/50V
C203 100/10V
IC 101
LA6458DS or IR9455B
R105 15k
R106 15k
R107 390k
R108 680
R109 470
C107 1/50V
C104 0.0012 (J)
C105 0.0012 (J)
C106 0.0082 (J)
-16dB (150mV)
R1 1.8k (1/2W)
C2 47/25V
D1 05Z-16Y
R110 47k
C3 47/25V
D2 05Z-16Y
R210 47k
16.5V
R2 1.8k (1/2W)
C205 0.0012 (J)
C206 0.0082 (J)
C204 0.0012 (J)
R205 15k
R206 15k
R207 390k
R208 680
R209 470
C207 1/50V
C557 0.047 (EUROPE only)
-16dB (150mV)
-37.3V
(EUROPE only) C559 330p
C147 10/35V
R143 5.6k
C142 220p
R142 56k
R144 560
R145 390
R149 1k
C146 2p
R148 3.3k (1/2W)
C145 47p 120V
R141 1k
C141 1/50V
C143 120p
C144 5p
-1.2V
IC 102
STK-465
R241 1k
C241 1/50V
C243 120p
C244 5p
R248 3.3k (1/2W)
C245 47p 120V
C246 2p
C242 220p
R242 56k
R244 560
R245 390
R249 1k
C5 4.7/50V
D3 05Z-24Z
C6 4.7/50V
-25.3V
R4 1.8k (1/2W)
R5 56
-24.7V
Q1 2SB834Y
-37.3V
-36.1V
C247 10/35V
R243 5.6k
-37.3V
C558 120p (EUROPE only)
C560 1/50V (EUROPE only)
C562 0.047 (EUROPE only)
S2
S3
FC5
FC4
PL2
PHONO (DUMMY SW) IN OUT
PL3
CD/AUX SW1-1 IN OUT
PL4
TUNER SW1-2 IN OUT
PL5
TAPE SW1-3 TAPE SOURCE
-16dB (150mV)/ 33kΩ
C505~C512 EUROPE only
CD/AUX
C505 330p
C506 330p
J2
TUNER
C507 330p
C508 330p
PLAY
TAPE
REC
C509 330p
C510 330p
C511 220p
C512 220p
C564 330p (EUROPE only)
GND
R121 2.2k
R122 56k
R123 18k
C122 0.018
C121 330p
LOUDNESS SW1-4 IN OUT
C221 330p
R223 18k
C222 0.018
R222 56k
R221 2.2k
VOLUME VR1 250k(B)x2
MAIN PCB
VOLUME PCB
C165 0.0033
R167 10k
R166 1.8k
C166 0.033
R165 560
VR3 100k(C)x2
TREBLE
R265 560
C266 0.033
R266 1.8k
C265 0.0033
R267 10k
BALANCE VR2 500k(W)



VOLTAGE SELECTOR (TOP VIEW)
240V
120V
220V
100V
SOCKET
PLUG
POWER SW PCB
POWER SW4 SDL-1P
P1
P4
Z2 0.01/250VAC
GENERAL EXPORT
VOLTAGE SELECTOR SW3
T1
120V RED
100V ORG
0V VIO
120V BRN
100V GRY
0V WHT
UNSWITCHED
SWITCHED
J5 AC OUTLETS (TOTAL MAX 300W)



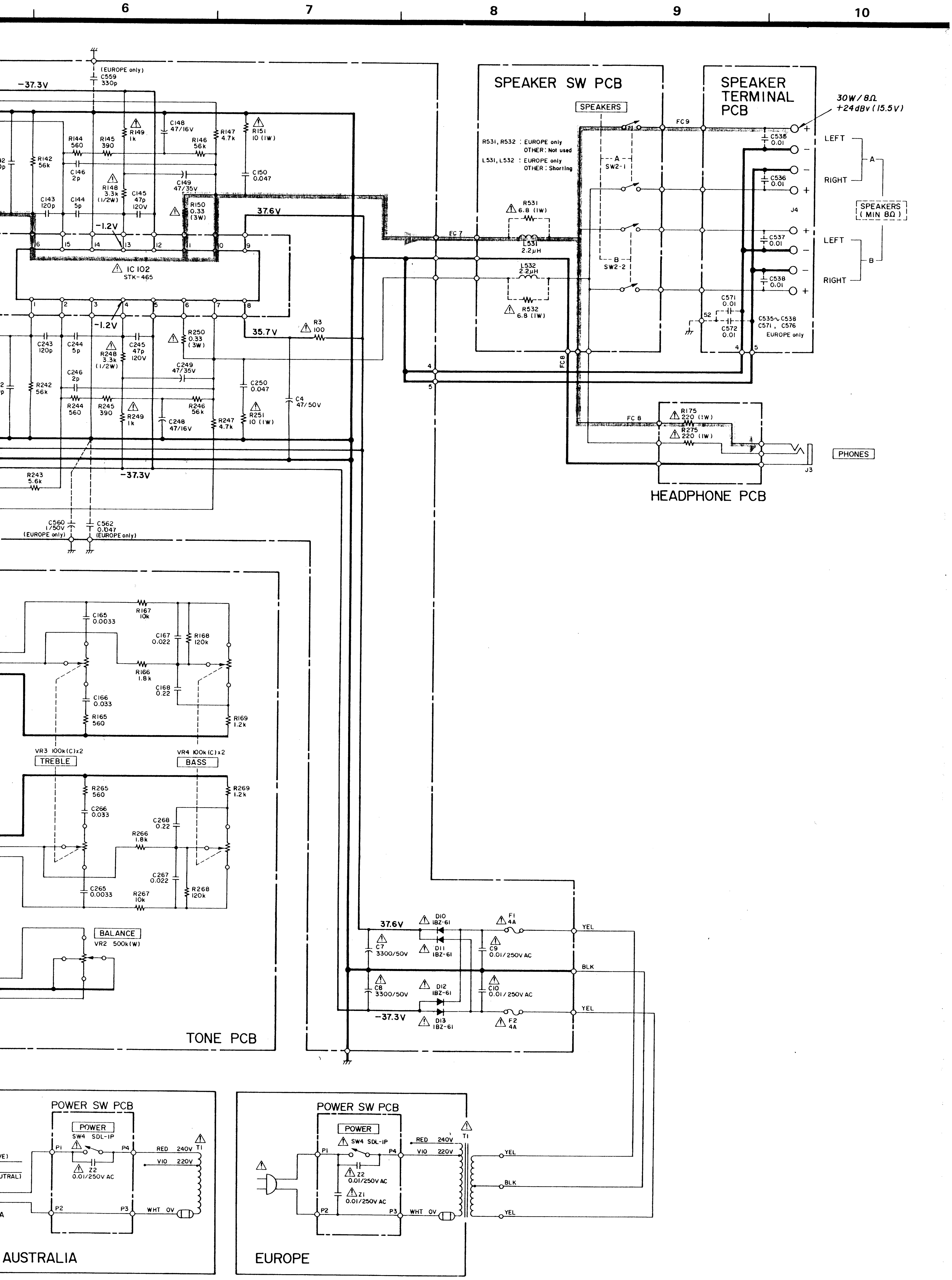
POWER SW PCB
POWER SW4 SDL-1P
P1
P4
P2
P3
Z2 0.01/250VAC
U.K.
BRN (LIVE)
BLU (NEUTRAL)
AUSTRALIA
WH
U.K., AUSTRALIA

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

NOTES

1. All resistors are 1/4W, ±5%, unless otherwise noted.
   Resistor values are in ohms (k = kilo-ohms, M = meg-ohms).
2. All capacitor values are in microfarads (p=pico-farads).
3. 0 dB=1 V
4. The DC voltages given in each portion are reference values measured under no-signal conditions.
5. ⚠ Parts marked with th must always be replaced appropriate parts list and e
6. ———— : +B power supply
7. ———— : -B power supply
8. ▬▬► : Audio signal path
9. ▭ : Front panel indic
10. ⌐- - -¬ : Rear panel indica



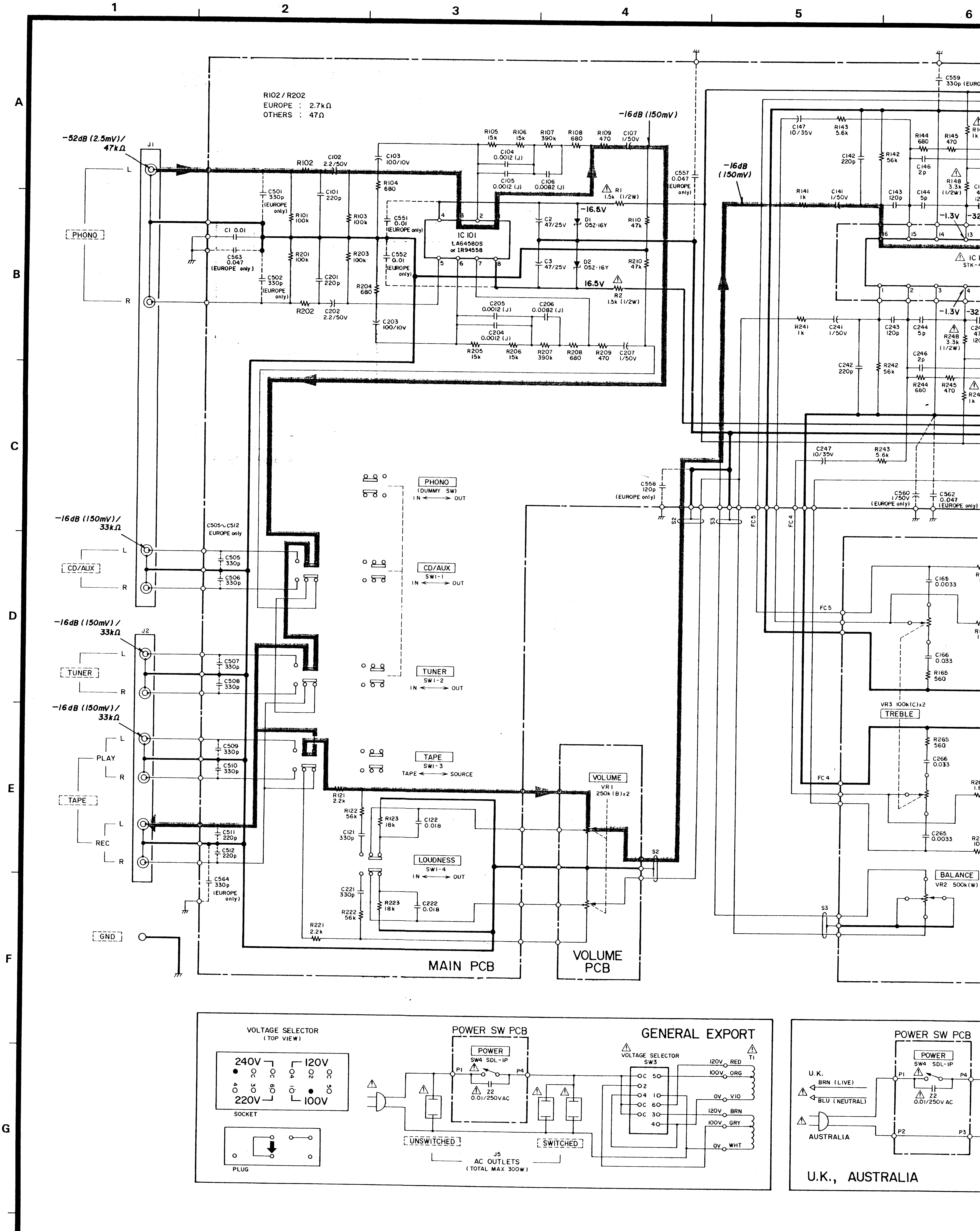
6
7
8
9
10
(EUROPE only) C559 330p
-37.3V
R144 560
R145 390
R149 1k
C148 47/16V
R147 4.7k
R151 10 (1W)
R146 56k
R142 56k
C146 2p
R148 3.3k (1/2W)
C145 47p 120V
C149 47/35V
C150 0.047
C143 120p
C144 5p
R150 0.33 (3W)
-1.2V
37.6V
IC 102 STK-465
C243 120p
C244 5p
R248 3.3k (1/2W)
C245 47p 120V
R250 0.33 (3W)
35.7V
R3 100
C249 47/35V
C246 2p
C250 0.047
R242 56k
R244 560
R245 390
R249 1k
C248 47/16V
R246 56k
R247 4.7k
R251 10 (1W)
C4 47/50V
R243 5.6k
-37.3V
C560 1/50V (EUROPE only)
C562 0.047 (EUROPE only)
SPEAKER SW PCB
SPEAKERS
R531, R532 : EUROPE only OTHER: Not used
L531, L532 : EUROPE only OTHER: Shorting
A SW2-1
B SW2-2
R531 6.8 (1W)
L531 2.2µH
L532 2.2µH
R532 6.8 (1W)
FC 7
FC8
FC9
SPEAKER TERMINAL PCB
30W/8Ω +24dBv (15.5V)
C535 0.01
C536 0.01
C537 0.01
C538 0.01
LEFT
RIGHT
A
B
J4
SPEAKERS (MIN 8Ω)
C571 0.01
C572 0.01
C535~C538 C571, C576 EUROPE only
FC 8
R175 220 (1W)
R275 220 (1W)
PHONES
J3
HEADPHONE PCB
C165 0.0033
R167 10k
C167 0.022
R168 120k
R166 1.8k
C168 0.22
C166 0.033
R165 560
R169 1.2k
VR3 100k(C)x2
TREBLE
VR4 100k(C)x2
BASS
R265 560
R269 1.2k
C266 0.033
C268 0.22
R266 1.8k
C267 0.022
C265 0.0033
R267 10k
R268 120k
BALANCE
VR2 500k(W)
TONE PCB
37.6V
D10 1BZ-61
F1 4A
C7 3300/50V
D11 1BZ-61
C9 0.01/250V AC
YEL
BLK
C8 3300/50V
D12 1BZ-61
C10 0.01/250V AC
-37.3V
D13 1BZ-61
F2 4A
YEL
POWER SW PCB
POWER
SW4 SDL-1P
P1
P4
RED 240V
VIO 220V
T1
Z2 0.01/250V AC
P2
P3
WHT 0V
AUSTRALIA
POWER SW PCB
POWER
SW4 SDL-1P
P1
P4
RED 240V
VIO 220V
T1
Z2 0.01/250V AC
Z1 0.01/250V AC
P2
P3
WHT 0V
YEL
BLK
YEL
EUROPE

5. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
6. ——— : +B power supply
7. ——— : −B power supply
8. ➡ : Audio signal path (shown for L ch only)
9. ▭ : Front panel indication
10. ⬚ : Rear panel indication

A-515 DC Integrated Stereo Amplifier

September 1983

TEAC SCHEMATIC DIAGRAM A-313

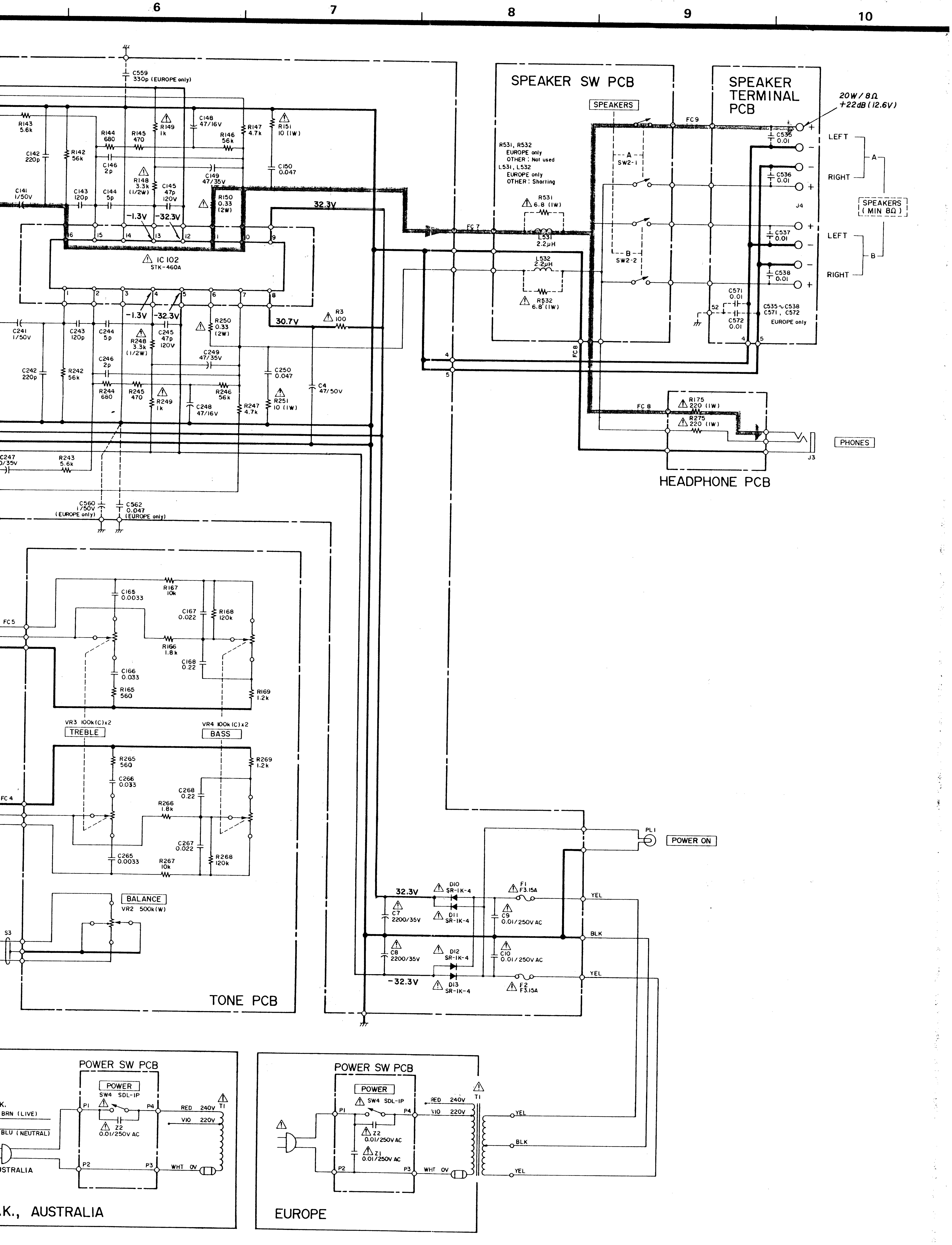

1
2
3
4
5
6
A
B
C
D
E
F
G
H
R102/R202
EUROPE : 2.7kΩ
OTHERS : 47Ω
-52dB (2.5mV)/ 47kΩ
J1
PHONO
-16dB (150mV)
IC 101
LA6458DS or IR9455B
-16.5V
16.5V
-16dB (150mV)
-1.3V
-1.3V
C559 330p (EURO
C557 0.047 EUROPE only
C558 120p (EUROPE only)
C560 1/50V (EUROPE only)
C562 0.047 (EUROPE only)
-16dB (150mV)/ 33kΩ
CD/AUX
C505~C512 EUROPE only
-16dB (150mV)/ 33kΩ
J2
TUNER
-16dB (150mV)/ 33kΩ
PLAY
TAPE
REC
C564 330p (EUROPE only)
GND
PHONO (DUMMY SW) IN ←→ OUT
CD/AUX SW1-1 IN ←→ OUT
TUNER SW1-2 IN ←→ OUT
TAPE SW1-3 TAPE ←→ SOURCE
LOUDNESS SW1-4 IN ←→ OUT
VOLUME VR1 250k (B)x2
MAIN PCB
VOLUME PCB
S2
S3
FC4
FC5
VR3 100k(C)x2
TREBLE
BALANCE VR2 500k(W)
VOLTAGE SELECTOR (TOP VIEW)
240V
120V
220V
100V
SOCKET
PLUG
POWER SW PCB
POWER SW4 SDL-1P
Z2 0.01/250VAC
UNSWITCHED
SWITCHED
J5 AC OUTLETS (TOTAL MAX 300W)
GENERAL EXPORT
VOLTAGE SELECTOR SW3
T1
120V RED
100V ORG
0V VIO
120V BRN
100V GRY
0V WHT
U.K.
BRN (LIVE)
BLU (NEUTRAL)
AUSTRALIA
U.K., AUSTRALIA

NOTES

1. All resistors are 1/4W, ±5%, unless otherwise noted.
   Resistor values are in ohms (k = kilo-ohms, M = meg-ohms).
2. All capacitor values are in microfarads (p=pico-farads).
3. 0 dB=1 V
4. The DC voltages given in each portion are reference values measured under no-signal conditions.
5. ⚠ Parts marked with
   must always be replace
   appropriate parts list and
6. ——— : +B power supp
7. ——— : −B power supp
8. ▬▶ : Audio signal pa
9. ▭ : Front panel ind
10. [- - - -] : Rear panel indi

INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.


6
7
8
9
10
C559 330p (EUROPE only)
R143 5.6k
C142 220p
R142 56k
C141 1/50V
R144 680
R145 470
R149 1k
C148 47/16V
R147 4.7k
R151 10 (1W)
R146 56k
C146 2p
R148 3.3k (1/2W)
C145 47p 120V
C149 47/35V
C150 0.047
C143 120p
C144 5p
R150 0.33 (2W)
-1.3V
-32.3V
32.3V
IC 102 STK-460A
-1.3V
-32.3V
C241 1/50V
C243 120p
C244 5p
R248 3.3k (1/2W)
C245 47p 120V
R250 0.33 (2W)
30.7V
R3 100
C246 2p
C249 47/35V
C242 220p
R242 56k
C250 0.047
C4 47/50V
R244 680
R245 470
R249 1k
C248 47/16V
R246 56k
R247 4.7k
R251 10 (1W)
C247 /35V
R243 5.6k
C560 1/50V (EUROPE only)
C562 0.047 (EUROPE only)
SPEAKER SW PCB
SPEAKERS
R531, R532 EUROPE only OTHER : Not used
L531, L532 EUROPE only OTHER : Shorting
R531 6.8 (1W)
L531 2.2μH
L532 2.2μH
R532 6.8 (1W)
SW2-1
SW2-2
A
B
FC7
FC8
FC9
SPEAKER TERMINAL PCB
20W/8Ω +22dB (12.6V)
C535 0.01
C536 0.01
C537 0.01
C538 0.01
C571 0.01
C572 0.01
C535~C538 C571, C572 EUROPE only
J4
LEFT
RIGHT
SPEAKERS (MIN 8Ω)
R175 220 (1W)
R275 220 (1W)
J3
PHONES
HEADPHONE PCB
FC5
C165 0.0033
R167 10k
C167 0.022
R168 120k
R166 1.8k
C166 0.033
C168 0.22
R165 560
R169 1.2k
VR3 100k(C)x2
TREBLE
VR4 100k(C)x2
BASS
R265 560
C266 0.033
R269 1.2k
C268 0.22
R266 1.8k
FC4
C267 0.022
C265 0.0033
R267 10k
R268 120k
BALANCE
VR2 500k(W)
S3
TONE PCB
PL1
POWER ON
32.3V
D10 SR-1K-4
D11 SR-1K-4
D12 SR-1K-4
D13 SR-1K-4
C7 2200/35V
C8 2200/35V
C9 0.01/250V AC
C10 0.01/250V AC
F1 F3.15A
F2 F3.15A
-32.3V
YEL
BLK
YEL
POWER SW PCB
POWER
SW4 SDL-1P
P1
P2
P3
P4
Z2 0.01/250V AC
Z1 0.01/250V AC
RED 240V
VIO 220V
WHT 0V
T1
BRN (LIVE)
BLU (NEUTRAL)
STRALIA
.K., AUSTRALIA
EUROPE

5. ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
6. ———— : +B power supply
7. ———— : −B power supply
8. ➡ : Audio signal path (shown for L ch only)
9. ▭ : Front panel indication
10. ⬚ : Rear panel indication

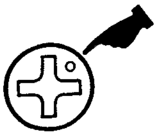
red

A-313 DC Integrated Stereo Amplifier

September 1983

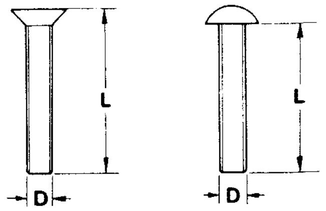
ASSEMBLING HARDWARE CODING LIST

All screws conform to ISO standards, and have crossrecessed heads, unless otherwise noted.
ISO screws have the head inscribed with a point as in the figure to the right.

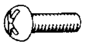
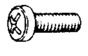
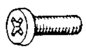
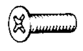
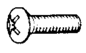
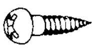
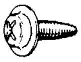
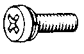
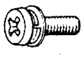
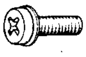
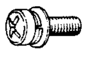


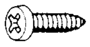
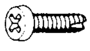
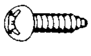
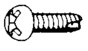
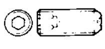
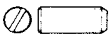
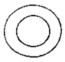
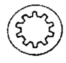
FOR EXAMPLE:

B M 3 x 6
- Length in mm (L)
- Diameter in mm (D) *
- Metric System
- Nomenclature



* Inner dia. for washers and nuts

	Code	Name	Type
MACHINE SCREW	**R**	Round Head Screw	
	P	Pan Head Screw	
	T	Stove Head Screw (Truss)	
	B	Binding Head Screw	
	F	Flat Countersunk Head Screw	
	O	Oval Countersunk Head Screw	
WOOD SCREW	**RW**	Round Head Wood Screw	
TAPTITE SCREW	**PTT**	Pan Head Taptite Screw	
	WTT	Washer Head Taptite Screw	
SEMS SCREW	**BSA**	Binding Head SEMS Screw(A Type)	
	BSB	Binding Head SEMS Screw(B Type)	
	BSF	Binding Head SEMS Screw(F Type)	
	PSA	Pan Head SEMS Screw(A Type)	
	PSB	Pan Head SEMS Screw(B Type)	

	Code	Name	Type
TAPPING SCREW	**BTA**	Binding Head Tapping Screw(A Type)	
	BTB	Binding Head Tapping Screw(B Type)	
	RTA	Round Head Tapping Screw(A Type)	
	RTB	Round Head Tapping Screw(B Type)	
SETSCREW	**SF**	Hex Socket Setscrew(Flat Point)	
	SC	Hex Socket Setscrew(Cup Point)	
	SS	Slotted Socket Setscrew(Flat Point)	
WASHER	**E**	E-Ring (Retaining Washer)	
	W	Flat Washer (Plain)	
	SW	Lock Washer (Spring)	
	LWI	Lock Washer (Internal Teeth)	
	LWE	Lock Washer (External Teeth)	
	TW	Trim Washer (Countersunk)	
NUT	**N**	Hex Nut